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ABSTRACT

This issue contains the following articles: (1) "Relative Clauses and their Antecedents in Serbo-Croatian and English: Mutual Restrictions," by W. Browne; (2) "Metalocutions, Structural Types and Functional Variation in English and German," by D. Gibbon; (3) "Neg-raising Predicates in English and Polish," by E. Modrzejewska; (4) "On Coming and Going in English and German," by G. Rauh; (5) "A Comparison of Sentence Patterns in English and German," by H. Jackson; (6) "Syntax in Contrast," by H. Haider; (7) "Presupposition and the Scope of Negation," by E. Mioduszewska; (8) "The Placement of Adverbs," by S. Jacobson; (9) "Toward a Contrastive Analysis of Tense and Aspect in Polish and English," by O. Swan; (10) "What Do We Need Lexical Contrastive Studies For?" by T. Krzeszowski; (11) "The Syntax of English and French Causative Constructions," by A. Hantson; (12) "On Items Introducing Finite Relative and Interrogative Clauses in English and Dutch," by F. Stuurman; (13) "Some Observations on the English and Polish Question-Answering Systems," by A. Charezinska; (14) "English and Polish Singular Nouns and Article Usage in English," by J. Critz; (15) "English versus Romanian Collectives," by O. Chelaru-Ionita and A. Bantas; (16) "On the Classification of Errors in Translation Papers with Some Consideration of Interference Phenomena," by H. Steinbach; (17) "Problems in Error Analysis," by L. Mukattash; and (18) "Teaching Arabic Emphatics to the English Learners of Arabic," by E. Odisho. (AMH)

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vol 5

RELATIVE CLAUSES AND THEIR ANTECEDENTS IN SERBO-CROATIAN AND ENGLISH: MUTUAL RESTRICTIONS

WAYLES BROWNE

University of Zagreb and Cornell University

1.0. In English as in Serbo-Croatian, the major type of relative clause begins with a *relativizer*, and is associated with an *antecedent* preceding the clause.[1]

(1) E I have the catalog which you wanted.
Antecedent Relativizer
Relative Clause
SC Imam onaj katalog koji ste htjeli.
that R 2.pl.auxiliary wanted
A R C

Antecedents can be adjectives, adverbials, or (in SC) quantity expressions, but here we will consider only noun phrase antecedents. Two different sorts of relativizers are observed. One is identical to one of the interrogative pronouns of the respective language:

---

[1] Both languages also have 'free relatives', clauses with no expressed antecedent:

(i) *What he says* is true.
(ii) *Tko pjeva*, zlo ne misli.
who sings evil not thinks
'One who sings thinks no evil'.

It should be noted that free relatives with *who*, though familiar from Shakespeare, are now archaic. An example like (iii) Who loves me wears jeans. (Sign on car in Zagreb, 1979) creates an extremely odd stylistic effect. Further study of the limitations on free relatives in English and SC would be rewarding, but cannot be undertaken here.

(2)	E	who	who?	SC	tko (gen. kòga, dat. kòme, etc.)	tko? 'who?' (gen. kòga, dat. kòme, etc.)
		which	which?		koji (fem. koja, neut.,koje, etc.)	koji? 'which?' (fem. koja, neut. koje, etc.)
					što (gen. čega, dat. čemu, etc .)	što? 'what?' (gen. čega, dat. čemu, etc.)

these act syntactically like pronouns and thus deserve the name *relative pronoun*. We will refer to the *što* of (2) as *declinable što*. The other sort of relativizer, English *that* or ø (zero) and SC indeclinable *što*:

(3) E I have the catalog that you wanted.
I have the catalog you wanted.
SC Imam onaj katalog što ste htjeli.[2]

we will claim are *subordinating conjunctions* (or *complementizers*).

1.1. It is not always recognized that *that*, ø, and indeclinable *što* are conjunctions when they introduce relative clauses, but the arguments for this view are strong.

First, if these items were pronouns, they should have the syntactic value of noun phrases as pronouns do, and hence be able to appear in all noun-phrase positions within the relative clause. In fact, these relativizers cannot occur in prepositional phrases:

(4) E *I have the catalog *about that* you asked.
*I have the catalog *about* ø you asked.
SC *Imam onaj katalog *o što* ste pitali.[3]
abt. asked

The true relative pronouns of (2) appear in this position without difficulty:

(5) E I have the catalog *about which* you asked.
SC Imam onaj katalog *o kojem* ste pitali.
which, masc. loc. sg.

---

[2] This example will sound artificial to many speakers, who would prefer *što ste ga htjeli* with the accusative personal pronoun *ga;* see discussion of (8). Common to all speakers is the construction with *koji* as in (1).

Second, *that* and ø and the *što* of (3, 4) are indeclinable, unlike pronouns in general. In English this is manifested in an inability to take the possessive *'s*:

(6) *a man that's friend is here
*a man ø's friend is here

(cf. *who* and *which*, which add *'s* to make *whose*[4]); and in SC in an inability to be used in positions requiring any case other than the nominative or (sometimes, see note 2) accusative. Thus with *divim se* 'I admire' which takes the dative:

(7) *onaj katalog što se divim.

The pronoun *što* of (2) indeed has a dative form *čemu*, but none of its forms can be used in sentences (3, 4, 5, 7) due to the nature of their antecedents, as we will see below.

Third: SC in fact has a way to express (7), namely by adding a third-person pronoun (agreeing in gender and number with the antecedent) in the required case. Here the antecedent *katalog* is masculine singular, and the verb *divim se* within the relative clause requires the dative:

(8) onaj katalog što mu se divim
3.sg.dat.masc.

If we were to call *što* in (8) a relative pronoun, then in the same clause there would be two different pronouns referring to the same antecedent. Whether we claimed that *što* and *mu* occupied the same syntactic position within the clause or not, we would still be faced with an anomalous situation not found elsewhere in SC grammar.

Fourth, *that*, ø, and indeclinable *što* are subordinating conjugations in the languages anyway, as in (9):

(9) E I am glad that we are here again.
I am glad we are here again.
SC Radujem se što smo opet tu.
I-am-glad we-are again here

---

[3] We can of course say *the catalog that/Ø you asked about;* here the preposition and the relativizer are not in the same phrase. SC cannot leave prepositions without objects, so that we do not get the corresponding **onaj katalog što ste pitali o*.

[4] Some speakers of English object to the now widespread use of *whose* as the possessive of *which*, and there has long been controversy among normativists as to its propriety. This finds an interesting parallel in SC *čiji* 'whose', which some speakers (particularly older grammarians) restrict to masculine singular human antecedents, although nowadays it is common with those of any number and gender and with non-human noun antecedents as well.

so that it is no great innovation to suggest that they can have the same function in another sort of subordinate clause, the relatives.[5]

2.0. In both languages, features of the antecedent restrict the choice of relativizer. Among these are one semantic feature: human referent or not, which we will write [±human], and one mixed (semantic-syntactic-morphological) feature, namely whether the antecedent contains a noun or not, which we write [±nomen].[6] Noun-phrase antecedents not containing nouns have quantifiers, demonstratives, indefinites, or substantivized adjectives as their heads, as will be seen in the examples.

2.1. In English the first feature is primary: [+human] antecedents require *who* as relative pronoun, rejecting *which*. We find this for [+nomen] antecedents:

(10) This is the student wanted who to see you.
*which
(11) Mary, who(m) I wanted to see, remained here.
*which

as well as those which are [−nomen]:

---

[5] *Što* in complement clauses appears only after certain factive main verbs and other expressions taking complements (like 'that we are here again' in (9)) whose content is presupposed true (Bibović 1971). This correlates well with the fact that some speakers reserve *što*-conjunction in relative clauses to those clauses used to help identify antecedents already known to the participants in the conversation; see Ivić 1973. Other speakers, true, use *što*-conjunction not only for this subset of restrictive relatives but for other restrictives and non-restrictives—just as an elegant variant of *koji*.

[6] Personal pronouns go along with nouns as far as the feature [±nomen] is concerned. Their appearance as antecedents to relatives is however limited. In both languages they can take non-restrictive relatives:

(i) E he, who(m) I greatly admire, ...
SC on, kojem se mnogo divim, ...
much

but at least the 3rd person pronouns do not appear with restrictive relatives in SC; a demonstrative of the proper gender is used instead.

(ii) E he who must die
SC *on / onaj koji mora umrijeti
that-masc. must die

In English constructions like (iiE) are used only in a rather literary or archaizing style. More normal usage would have a pronoun *one*

(iii) the one who must die

or (in the plural) a demonstrative:

(iv) those who must die, the ones who must die.

We here take for granted the distinction of restrictive and non-restrictive, familiar from school grammar. It is reflected in English and (recently) in SC orthography by the use of commas to set off non-restrictive clauses but not restrictive ones.

(12) Anybody who wants to see me should remain here.
*which

(13) Those who want to see me should remain here.
*which

(14) Everyone else, who still wanted to see me, remained.
*which |

On the other hand, [−human] antecedents allow *which* and not *who*. This is clearly true for the [+nomen] ones: cf. (1, 5) and

(15) The catalogs, which were well printed, went well.
*who

Those carrying the feature [−nomen] similarly reject *who* but their association with *which* is more or less limited. With indefinites in...*thing*:

(16) nothing/anything/something/everything (?) which he has
that, ø

which is possible but *that* is more normal, or ø. *All* goes very unwillingly with *which*:

(17) all ??which he has
that, ø

Demonstratives allow *which* fairly well in non-restrictive clauses, as in (18), but in restrictives *this* rejects all relativizers, cf. (19):

(18) This, which you may recognize, is a test tube, and that, which you haven't seen yet, is a hydrometer.

(19) This ?which you pointed out is surprising.
?that
?ø

That as antecedent allows *which* but only in the literary style mentioned in note 6; see (20).

(20) That which he has written is an inspiration to us all.
?that
?ø

Substantivized adjectives tend to disallow *which*:

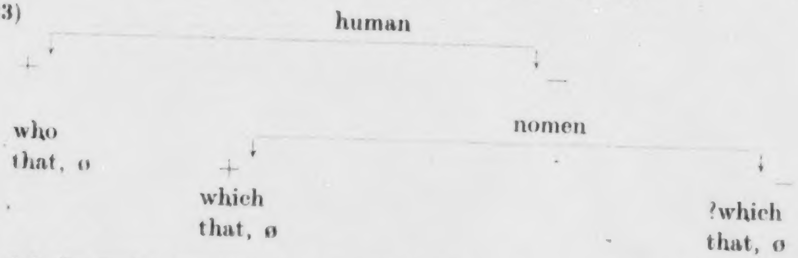
(21) He has shown you the best ?which he has.
that
ø

except for non-restrictives:

(22) The beautiful, which Plato describes, is...

Thus in English the choice of relative pronouns is conditioned by features of the antecedent; the conjunction strategy with *that* or ø is allowable in restrictive relatives whatever the antecedent[7], and in those with [−human, −nomen] antecedents is the only acceptable type (except for a sort of dissimilation effect with the antecedents *this* and *that*). Graphically:

(23)



2.2. In Serbo-Croatian the second feature is the primary division. Only nouns can be antecedents to *koji* (but see note 6); their humanness is irrelevant. Compare (1) and:

(24) Ovo je student koji Vas želi vidjeti.
this is you wants to see
'This is a/the student who wants to see you.'

---

[7] T. Zabrocki (Fisiak et al. 1978 : 164) suggests that *that* cannot be used when the antecedent is [+human] and plural. This leads him to star the perfectly acceptable example

(i) The boys *that you met there.

Through some slip, he offers *which* instead of *who* as a corrected variant. *That* here is comparatively uncommon, but does occur. A count of *that*-relatives in the Zagreb version of the Brown Corpus (see below) reveals that only ca. 5 out of 165 plural-antecedent examples have the feature [+human], which is much less than the proportion of human nouns to nouns in general. But the examples found, as well as constructed examples like those in this paper, seem quite normal to native speakers. Here are the 3 clearest instances:

(7863) ... the Southern Negro is becoming conscious of quality and does not wish to be associated with radio which is in any way degrading to his race; he tends to shy away from the hooting and hollering personalities that originally made Negro radio programs famous.

(13938) ... the unhappy pilot, pushing his luck, begged the postal officials that met him to find a safer landing place, preferably on the flat-topped hills across the Winooski River.

(15409) The last two writers introduce strong political bias into their works, and not unlike the union leaders that we will discuss soon, see folklore as a reservoir of protest by a downtrodden and publically silenced mass. (The Corpus is available in Zagreb; see Filipović 1971b, 36–43).

(25) Marija, koju ste željeli vidjeti, ostala je tu.
fem. sg.acc. wanted remained aux.
'Mary, who(m) you wanted to see, remained here.'

The [±human] distinction shows up only among the remainder of the antecedents, the indefinites, demonstratives, and other non-nouns (in the sense of note 6). The [+human] ones take *tko* as their relativizer:

(26) nitko /netko /svatko /onaj | tko je tu
no one someone everyone that one | who is here
jedini /posljednji | *koji
the only one the last one | *što[8]

and are the only words to do so.

The [−human] words take the relative pronoun *što* (declined); here is the indefinite set, all neuter.

(27) nešto /ništa /sve što je tu
something nothing all is here
*koje (neuter)
*tko

To show that we have the pronoun and not the indeclinable *što*, we give the same set with a verb in the relative clause which requires the dative.

(28) nešto/ništa/sve čemu se divim
that I-admire
*što mu
*kojem (neut. sg. dat. of *koji*)
*kòmu (dative of *tko*)

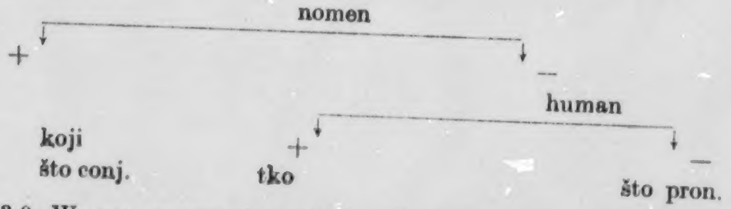
The ungrammaticality of *što mu* shows that we have only the pronoun *što* and not the subordinating conjunction. We find the same facts with the neuter demonstratives and substantivized adjectives:

(29) ovo/to /onō | što je tu
this this, that that | *koje
jedino /prvo | *tko
the only thing the first thing | čemu se divim
*što mu
*kòmu

---

[8] *Onaj koji* is also found, but we interpret it as the result of leaving out a noun under the influence of context: *onaj student / katalog / čovjek* 'man' etc. ... *koji*. The indeclinable *što* might be used here by some speakers, but not the pronoun *što*, as we can show by trying to use a case form:
(i) nitko/netko/svatko/onaj *čemu se divim.

A graphical presentation shows the opposite order of features from English:
(30)



3.0. We can propose a (partial) explanation for the 'forbidden' combinations of antecedent and relativizer in our two languages, but not for the different hierarchy English and SC show among the two features—that seems to be part of the irreducible variation that can exist among languages. A relative clause referring to a noun antecedent presumably has, in its underlying structure, an anaphoric pronoun (or anaphoric repetition of the noun). Several circumstances, particularly in SC, support this. One is the *što mu* construction, as in (8), where an anaphoric pronoun is present on the surface as well. Another is seen in conjoined relative clauses, where there is only one relativizer for more than one clause:

(31) zemlja o kojoj znamo malo ali je smatramo važnom land abt. which we-know little but it we-consi-der import-ant 'a country which we know little about but which we consider important'

Here, as argued in Browne 1971, *kojoj* represents the relativizer for the first relative clause plus its anaphoric element (referring to the antecedent *zemlja*); the relativizer of the second clause can be left out, since it is identical to that of the first clause, and then the anaphoric element surfaces by itself in the shape of the 3rd person singular personal pronoun *je* 'it' (acc. sg. fem.).

We can see anaphoric nouns surfacing in some non-restrictive clauses, both in English and in SC:

(32) E an accident on the road, in which accident several persons were injured
SC nezgoda na cesti, u kojoj nezgodi je ozlijedjeno više ljudi
accid. on road in which accid. aux. injured several people

The non-nomen antecedents mentioned above, demonstratives, indefinites and the like, do not take part in the system of reference and anaphora in the same way that nouns do. From a logical point of view they may lack referents; from a textual point of view, a repetition of an indefinite (*anybody ... anybody...*) cannot have the second occurrence co-referential with the first as is typical for nouns; and grammatically they may fail to pronominalize in the same way as nouns. This last is especially clear in SC, where at least the neuters ***nešto, ništa, sve, ovo, to, ono, jedino, prvo*** etc. cannot be referred to by the usual 3rd person anaphoric pronoun *ono*, gen. *ga*, dat. *mu*, acc. *ga* etc. 'it'. Rather, the demonstrative *to* must be used.

(33) Vidiš li sve ovo? Baci to/*ga!
you-see interrog. all this Throw that/it
'Do you see all this? Throw it away.'

We regard this as directly connected with the failure of these words to relativize with *koji*. Our tentative hypothesis is that *koji*, which as an interrogative modifies a noun and asks for the identity of the referent, plays a similar role in the underlying structure of relative clauses, that of modifier specifying the reference of a repeated anaphoric nominal.

3.1 In English the content of sentences and predicates can be referred to as *it* and relativized with *which* (such relatives are always non-restrictive):

(34) a. Several people were injured. I didn't expect it.
b. Several people were injured, which I didn't expect.

Again SC must use *to* instead of the anaphoric pronoun to refer, and the declined *što* to relativize:

(35) a. Ozlijedjeno je više ljudi. Nisam to očekivao. (*ga)
injured aux. sev. people. I-did-not that expect.
b. Ozlijedjeno je više ljudi, što nisam očekivao. (*koje)

The choices observed in (34) and (35) are just what we expect on the basis of our treatment. A sentence antecedent, since it is not human nor a noun, has the features [−nomen, −human]. It excludes restrictive relatives for a semantic reason, which we can try to sketch: sentences (predicates) do not mark out sets of things in the mental or physical world in the way that noun phrases do, and so we cannot add a restrictive which would narrow down such a set or pick out one of its members.

In English the [−human] feature rules out *who* as a relativizer and makes us look at the value of [nomen]; this is minus, leading us to expect *that*, *ø*, or (especially in non-restrictives) *which*. Since we have only non-restrictives, *that* and ø are not possible and only *which* remains. In SC the value [−nomen] rejects *koji* and *što*-conjunction, and leads us to the [human] feature; [−human] selects the pronoun *što* as a relativizer, and, as in (33) above, requires the demonstrative *to* as an anaphor rather than *ga*. To see that *što* here is the pronoun, we give another example with a verb *čudim se* 'I am surprised at' taking the dative:

(36) Ozlijedjeno je više ljudi, čemu se ne čudim.
*što mu se ne čudim.
'Several people were injured, which I am not surprised at.'

4. The differences in relativization between the two languages are obvious sources of errors on the part of speakers of either one learning the other, and errors in both directions are indeed observed. (Yugoslavs' errors in English, contrary to the experiences of Muskat-Tabakowska (1976) with her Polish students, definitely include *which* after human antecedents; as with Poles, we also find *what* for *that*-conjunction and *which*. See Kranjčević (1971: 70 ff.)) Errors in pronominalization are also found, both among Yugoslav students of English (overuse of *that* after non-noun antecedents) and in Englishmen and Americans acquiring SC (attempts to use *ono*, *ga*,... for impermissible antecedents). It is still a question for discussion how far an explicit attempt to connect pronominalization and relativization phenomena can be relevant for language teaching.

The SC system of relatives is similar to Polish (cf. e.g. Schenker 1966–67) and Russian (e.g. Corbett 1976); one can set up the following table of relativizers and the types of antecedents they go with:

(37)

SC	Pol	Rus	
koji	który/jaki	kotoryj	[+ nomen]
tko	kto	kto	[– nomen, + human]
što-pron.	co-pron.	čto-pron.	[– nomen, – human]
(čega, čemu)	(czego, czemu)	(čego, čemu)	
što-conj.	co-conj.	čto-conj.	[+ nomen] (restricted)

Co and *čto* as conjunctions are not usually accompanied by personal pronouns. There is therefore no mechanism for indicating case, and *co*/*čto* can appear only when the relative clause requires a subject of (sometimes) an accusative object; they are also colloquial in style, which is true for some but not all speakers of Serbo-Croatian with their *što*-conj. Ukrainian, on the other hand, frequently uses the corresponding form *ščo* as an indeclinable accompanied by case-indicating forms of the personal pronouns (*joho* masc. and neut. sg. genitive/accusative, *jomu* masc. and neut. sg. dative, etc.).

But a system like (30) is no Slavic specialty. German has similar restrictions on its relativizers, so that *der* and *welcher* (or rather their neuters *das*, *welches*) cannot be used after the [—nomen, —human] forms *etwas was*, *alles*, and others; *was* must be used instead, corresponding to declinable *što*. On the other hand, the Slavic languages Bulgarian and Macedonian have different systems of relativizers and fewer conditions on their use.[9]

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[9] In Bulgarian, to give a quick sketch, the equivalents of SC *tko* and *koji* merge as *kojto*, where *-to* (Macedonian *-što*) is a general marker of relativization. The feature [± human] becomes relevant in non-nominative uses, since only a [+human] *kojto* can

5. Questions of what one canNOT say in a language, and WHY not, have generally been neglected by Slavic grammarians, except when normative judgements had to be made: traditionally a statement in a grammar that such-and-such is not good X-ian or X-ish has meant that certain speakers indeed use it, contrary to what the grammarian considers proper. Contrastive studies (including error analysis) and generative grammar have, each in its own way, contributed to changing this situation and thus increasing our knowledge of our languages–and as a result, of general linguistics as well. Most of the papers in our bibliography owe their existence to contrastive or generative studies or both.[10]

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have the oblique case *kogoto* and the optional dative *komuto*. *Što* exists for [–human, –nomen] but *koeto* (neuter of *kojto*) is also found. *Deto*, as a conjunction, appears with a personal pronoun very much as indeclinable *što* does in SC. I am indebted to E. Dyczak for helpful discussion.

[10] Much of my understanding of English and SC relatives is due to discussion and collaboration with Dora Maček, my colleague on the Yugoslav Serbo-Croatian-English Contrastive Project (see Maček 1970, 1975) and to work done by Ljiljana Mihailović on the same project (Mihailović 1973). Mladen Vitezić (1972, 1973) arrived at some similar results largely independently. I am also grateful to Theresa Alt and other participants in the 17th International Conference on Polish-English Contrastive Linguistics (Boszkowo, May 10–12, 1979), at which this paper was first presented.

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METALOCUTIONS, STRUCTURAL TYPES AND FUNCTIONAL VARIATION IN ENGLISH AND GERMAN

DAFYDD GIBBON

University of Göttingen / University of Bielefeld

The main aim of this paper is to focus attention on the ways in which functional variants, styles, registers, etc. of English and German may be marked by prosodic patterning. Such marking is seen as one aspect of the metacommunicative functions of forms of language; this particular function is referred to as "metalocutionary", and is clarified in the paper as a preliminary to the discussion of functional variation. The five sections of the paper are: 1. Metalocutions and the representation of structure; 2. Functional variation; 3. A mixed-channel functional variety: reading aloud; 4. Further functional varieties in English and German; 5. Conclusion. One of the main points made is that in contrastive studies, it is necessary to be explicit about the functional variety of language under consideration in order to be sure that potentially comparable varieties are being contrasted.

1. METALOCUTIONS AND THE REPRESENTATION OF STRUCTURE

The functions of language are sometimes referred to a set of "constitutive factors" in communication, the most frequently cited being *speaker*, *hearer* and *context* (cf. Bühler 1934); this set was extended by Jakobson (1960) to include the factors *code*, *channel* and *message*, and an "orientation" or "set" towards each of these six factors was held to determine a fundamental function of language. These six functions were, in the order of factors given above, *emotive*, *conative*, *referential*, *metalingual*, *phatic* and *poetic*. Using Jakobson's classification, a rough distinction into what might be called the conventional pragmatic and semantic functions of language may be made by reference to the first three functions, on the one hand, and the area of metacommunicative functions on the other, an area which has not figured prominently in traditional functionalism but which is receiving increasing attention. What the three metacommunicative functions have in common is that they involve the "reflexivity", simultaneous *use* and *mention* of language: language is used to refer to itself, either to the system, or to the various aspects of language use (a given message in a given channel).

In the present paper, the place of intonation systems (in particular, pitch contours, their temporal organisation and their relation to other language structures) within this set of functions will be considered. Elsewhere (Gibbon 1975: §4.3.; 1976a) I have dealt with some of the phatic functions of intonation, i.e. the use of intonation as a marker of the effectivity of the channel; here, attention will be focussed particularly on certain aspects of what Jakobson called the metalingual function of language, particularly the use of intonation to refer in various ways to the locution or "text" being uttered. This type of metalingual sub-function will be referred to as "metalocutionary", a somewhat narrower use of the term from that suggested in the earlier work cited above. The term "metalinguistic" will be avoided in view of its specific meaning within logical semantics, Jakobson's "metalingual" and Bateson's (1952) "metacommunicative" being preferred for the more general uses sketched above. A further qualification on the terminological framework is also called for: the framework given by Jakobson is open to criticism on a number of grounds; to provide such criticism is not the task of the present paper, however, and for the simple reason that the framework is quite well-known and has considerable heuristic value it will be used here as a starting point for the analysis. It should be pointed out, nevertheless, that such notions as *message*, *code* and *channel* and their interrelations are in need of considerable further clarification.

Assuming for the moment, however, that the status of the metalingual function among the three metacommunicative functions is intuitively fairly clear, the distinction between the metalingual, specifically: metalocutionary, uses of intonation patterns and metalingual uses of other language forms stands in need of clarification. The range of such uses (which overlap at many points with the phatic and so-called poetic functions) extends from explicit *verba dicendi*, in particular performative verbs, through *nomina* and *adverbia dicendi*, various types of appositive or parenthetic expression, to the various modal and dialogue-structuring particles (cf. Bublitz 1978) and tags (e.g. *well*, *now*, *after all*, *isn't it*, ... *right*, etc. in English and *so*, *nun*, *doch*, *nicht wahr*, ... *oder*, etc. in German) and the various prosodic and paralinguistic patterns (involving pitch patterning and its timing, changes in voice quality, etc.) which are used for related modal and dialogue-structuring purposes. Since the modal uses of particles and pitch patterns are generally referred to non-metacommunicative language functions, they will be ignored here; the relation of pitch patterning in time to the locutions which it accompanies is what will be discussed. It is perhaps important to point out that this is not the only function of pitch patterning; pitch patterns also function in the absence of any locutionary patterning whatsoever, and such functions are clearly in some sense (e.g. ontogenetically) more basic than the metalocutionary functions, though lower on a scale of explicitness of meaning.

In most functionally oriented intonation descriptions (as opposed to more strictly structuralistic descriptions), the various kinds of pitch patterning have generally been accorded a fairly high degree of autonomy with respect to other, more narrowly grammatical or locutionary systems of language. A succinct formulation of this view was given by Wang:

> "... intonation provides the speaker with another channel of communication by means of which he can express a more personal commentary on the sentence he is producing" (1971:274).

The information conveyed by this channel is not reducible to locutionary information, and for this reason, intonation patterning is never fully determined by locutionary information (e.g. syntactic structure, lexical relations). An additional problem is that the means of prosodic structuring are fairly limited in comparison with what lexico-syntactic locutions have to offer, thus complicating the locution-intonation relation; this has become particularly noticeable in the framework of generative phonology, which has attempted the kind of non-autonomous description rejected here; cf. Bierwish (1968), also Chomsky, Halle and Lakoff:

> "There is an upper limit to the number of stress levels which ared istinguished. This limit apparently varies with different styles of speech, as well as for different speakers" (1956:75).

What is said here about stress applies also to prosodic and paralinguistic patterning in general. Some of the "styles of speech" referred to will be explicated under the heading of "functional variation" below; first, however, a note on the nature of the metalocutionary relation between intonations and locutions is required.

The first point to be made is that the metalocutionary relation is regarded as a *semantic* relation of reference to segments of locutions by pitch patterns (of various kinds, from accents to intonation patterns in the narrower sense) – note the formulation by Wang: "... commentary on the sentence...". This semantic relation is to be distinguished (a) from the syntactic relations often postulated for intonations when conceived as "morphemes" (here regarded as an untenable view of intonation, following Bolinger, 1965: *passim*) and (b) from the conventional, arbitrary, "non-natural" (Grice 1957) or "symbolic" (in the sense of semiotics) referential relation characteristic of languages, and indeed of metalanguages, in general. Metalocutions enter into a "natural"

(Grice, 1957) relation with the items they designate, which may be conveniently referred to by the semiotic terms "indexical" and "iconic". Indexical signs denote by virtue of the natural relations of causality (e.g. smoke and fire; high pitch and excitement – note that causality is not necessarily a *simple* relation in such cases!) or spatio-temporal contiguity (e.g. a sign-post, a spotlight, or in the present case a pitch accent). The former natural relation, causality, is not metacommunicative, and in particular not metalingual or metalocutionary in the narrower senses used here. The latter, contiguity, is, however, metalocutionary: pitch accents denote foci of syntagmatic relations within locutions. These relations may be at any one of the following levels of analysis:

1. Dialogue strategy, exchange and contribution structuring;
2. Text-referential structuring (theme-rheme patterning, various types of anaphoric relation, including metalingual, e.g. contrastive, relations (cf. Schmerling 1973; Ladd 1978);
3. Collocational (in Chomskyan terms: selectional) patterning, such as greater/less generality in terms of selectional features (cf. Bolinger 1972);
4. Sentence and word constituent structure, possibly with transformational pattern-preservation as suggested by Bresnan 1971; 1972).

In isolated, invented written sentences which have to be read aloud, such as the following,

(1) I'm not going because I'm tired

the level of analysis with the greatest claim to prosodic indexing of the foci of its syntagmatic relations is level 4, that of sentence and word constituent structure, with 3, collocational structure a close second. Since it is not part of a dialogue, and its status within the present text is that of an *example*, a particular kind of quotation, the first two levels are irrelevant.

This sentence may be used to show the value of as well as the problems associated with the notion of metalocution. Example (1) is, as it stands, ambiguous on grounds which can be given quite independently of punctuation, intonation, etc., depending on whether the scope of negation is *going* or *going because I'm tired*; in the latter case, the verb phrase specification is negated, leaving the less specific verb unnegated, whereas in the former case the reverse is true. In an isolated sentence such as (1) – and not necessarily in contextualised sentences where the syntactic level may be overridden by the structure of textual or dialogue sequences for the purpose of intonational marking - the two scopes may be partly disambiguated by the cues provided by accentual indices, as in (2) and (3).

(2) I'm not GOing because I'm TIRED
(3) I'm not going because I'm TIRED

In these cases, the focus of negation scope is, simplifying slightly, the constituent marked by the nearest accentual index; the accent is in itself a boundary marker in this sense, but may be supplemented by further boundary markers. Anyone who has concerned himself extensively with intonation analysis will realise immediately that a simple capitalisation transcription for "stress" or "accent" is hopelessly inadequate, since the forms which are indexically used in this way are extremely complex functions of rising or falling pitch, of relative pitch height and steepness of pitch contour, and of temporal organisation of other types; for this reason, the transcriptions of (2) and (3) may represent a wide range of phonetically quite different pitch patterns. In addition, pitch accents of different types (e.g. rising and falling) may occur in sequence, resulting in different focus markings due to differences between the indexing structures used; contrast two (out of many possible) accent assignments to a sequence like (2) which only caters for one accent type:

(4) I'm not ´going because I'm `tired
(5) I'm not `going because I'm ´tired

Example (5) is likely to be interpreted with the same reading as example (3), not example (2), but shows at the same time that de-contextualised sentences of this kind are unsuitable for demonstrating more than a highly restricted area of intonation functions: they "demand" completion by addition of a textual or other context, and thus act as a reminder of the presence of other levels of organisation with claims to metalocutionary marking which may override those of syntax.

Iconic natural semantic relations are based on the sharing of some feature by the sign and whatever it denotes, as with pictographic writing or onomatopoeic sounds. In the present case, pitch patterns in time represent very general syntagmatic relations between the locutions they accompany, at some level of analysis selected by users in context. The simplest case is the configurative function ascribed to intonation by members of the Prague school (cf. Daneš 1960; Jakobson and Halle 1956), whereby continuous pitch patterns (amongst other features) are held to mark as a constituent the locutionary stretch with which they are co-extensive. It will be seen that this particular function is simultaneously indexical in the sense described above; the condition of co-extensiveness is distinct, however, from the contiguity condition given for the more sudden pitch changes associated with pitch accent.

Thus, disambiguation cues items such as (1) may be provided by means of overall intonation contours, as well as indices of the foci of the relation: the scope of negation (or other relevant relations) may be taken to be co-extensive with the pitch contour.

More complex kinds of relation than this, such as those of co-ordination or exocentric and endocentric subordination, may be represented by other kinds of pitch patterning, in particular by the selection of the contour directions of pitch accents; examples (4) and (5) above are suitable illustrations of this. In (4), a rise and a fall *in that order* have equal status, other things being equal; the item indexed by the rise, being nearest to the negation operator, is thereby taken to mark the end of the scope of that operator. In (5), a fall and a rise *in that order* are taken to mark the head and satellite respectively of a subordinating relation, leading to the interpretation of this sequence as one constituent; additionally (and this is usually taken to be the main point in traditional discussions of this kind of construction), the final rise indicates contextual incompleteness, which may be satisfied at the dialogue level, a level which is, however, foreign to the method of "intoning isolated quotative written sentences" exemplified here.

It is not the aim of this paper to do more than sketch the main features of the metalocutionary hypothesis: the following sections deal rather with the way metalocutionary patterning varies with different functions of language in use (i.e. with "style", "register", "functional variation", terms which will be clarified in the following section). Naturally, any further conclusions about the use of intonation patterning on such a grand scale are dependent on the validity of this hypothesis; suffice it to say for present purposes, however, that the metalocutionary hypothesis is essentially part of an attempt to clarify and extend some older notions of how intonation is used, such as the culminative and delimitative functions postulated by the Prague school (here cf. Trubetzkoy (1939:29); cf. also Daneš 1960, Jakobson and Halle 1956), and that it is part of an attempt to place these notions in a more explicit functional framework which rejects such vague and ill-understood quasi-predicates as "speaker attitude", "illocutionary force indicating device", or even simple syntactic categories, as possible descriptive terms in a theory of intonation function (cf. Gibbon 1975; 1976a, for further discussion).

2. FUNCTIONAL VARIATION

Terms for varieties of language, such as "style", "style of speech" (cf. the quotation from Chomsky, Halle and Lukoff above), "register", or "dialect", "sociolect", etc., may be defined, like the functions discussed in the preceding section, on the basis of their relation to the "constitutive factors" of communication; for this purpose, the Jakobsonian set of six factors will be reduced to a set of four, which proves quite adequate for the purpose: *participant*, *channel*, *semantic context* and *language*. The relation between this set and Jakobson's will be assumed to be evident. Dialects and sociolects may be defined with respect to relations holding within the class of available participants; styles may also be partly definable on this basis. Other varieties are definable with respect to variations in the semantic context (cf. "register" in the sense of Halliday 1975) or by reference to the channel (or set of channels) available. The last category of language variation has often figured in descriptions of "styles", in particular in distinguishing written from spoken language (cf. Joos 1961, whose "frozen" style is distinguished by being "intonationless", associated with writing; Crystal and Davy 1969); in the intonation literature, too, discussions are to be found, from Pike's references to "formalized" intonations and calls (1945) through Chao's "specialized and stylized forms of speaking" (1956), to work on the relations between the tonal systems of remote speech and such stylized patterns (reviewed and extended in Gibbon, 1975: §4.3; cf. also recent work by Liberman 1978, and Ladd 1978). Variation ascribable to channel structure has not, however, received systematic attention; there is no generally accepted term for this kind of variation, though it falls under some definitions of "register" (cf. Gibbon, to appear).

Although the term "functional variation" may with some justification be used in a broader sense, it will be restricted here to cover channel-oriented variation, which in turn is associated with the particular area of language function which Jakobson designated "phatic" (which thus has a somewhat different meaning here from the meaning given to the term by Malinowski (1923).

A channel may be defined in terms of an input device, an output device and a medium of propagation. Without going into technical detail, the constraints imposed by the channel in use, which count among the *natural* factors determining functional variation, encompass production and perception constraints, bandwidth, spped of communication, channel capacity, etc., and their relation to speech. One important area of influence of channel constraints on the use of metalocutionary devices is in the context of the monitoring of channel effectivity and in the marking of strategies for increasing channel effectivity. These range from simple phonological and phonetic strategies such as deliberately clear enunciation, through prosodic and paralinguistic strategies such as shouting, use of chromatic ("stylised" — cf. §4 below) contours and contrastive accent assignment, to locutionary metalingual strategies such as spelling out, the use of spelling alphabets, repetition, or uptake-securing dialogue loops involving tags, echo-questions, contrastive constructions, and various kinds of "back-channel" communication (Yngve 1970) by means of which the hearer signals reception of communication. These strategies have in common a status as supplementary to or superimposed on or interrupting the smooth flow of "normal" homogeneously structured dialogue, and the function of accomodating dialogue, via recognition of real or imagined difficulties in communication, to the exigencies of the channel which is in use. It is not necessary to point out the roles of intonation in detail at this point; certain indications have been given, and other functions (for instance, rising terminals to initiate certain types of dialogue sequence) will occur to the reader.

A more indirect effect of channel structure on metalocutionary structuring may be seen by considering different types of medium of propagation, in particular with respect to the property of *storage* of the signal in contrast to channels in which the signal decays rapidly. A simple summary of some of these channel types is given in Figure 1. There are, of course, other *non-natural* (e.g. social) constraints associated with the varieties concerned in addition to the natural constraints; in particular stereotypy, both of locutions and of metalocutions, is a complicating aspect (cf. the idiomatic use of prosodic patterning, Hockett 1956; Halliday 1966; 1970). These aspects are not central to the present discussion, however, through they will be referred to again below.

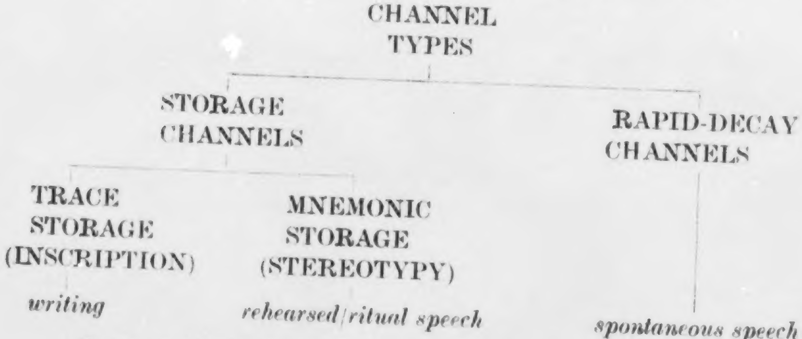

CHANNEL TYPES
STORAGE CHANNELS
RAPID-DECAY CHANNELS
TRACE STORAGE (INSCRIPTION)
MNEMONIC STORAGE (STEREOTYPY)
writing
rehearsed/ritual speech
spontaneous speech

Figure 1: Some channel types with associated functional varieties

The distinction between the two functional varieties of speech and writing, insofar as they influence the use of metalocutionary signalling, may be summarised as follows.

Spontaneous speech is reletively fast, imposes stringent requirements on simultaneous real-time processing in production and perception (being a rapid-decay channel), and contains the whole range of locutionary structural levels, from the dialogue down to the word, as possible sources of semantic referents for metalocutionary patterning; in addition, a wide range of non-metalocutionary uses of pitch patterning is potentially present. This variety also offers a range of parameters for use as metalocutions, in particular pitch-patterning in time, but also temporal variation with respect ot other phonetic features, and changes in voice quality, distortions of the phonological system and other inhomogeneities. It may often be supplemented by visual gestural channels. As far as the effect of the channel on the language used is concerned, there is a tendency, in the longer contributions to dialogue, for co-ordinating structures to predominate, even to the extent that such conjunctions as *because*, *so* tend to take on a generalised function, as in example (6) (from Crystal and Davy (1975), Extract 4, 11. 16ff.), in non-binary series:

(6) ... and all this so this pig was absolutely dead so they put it on they have a sort of smouldering heap that smoulders all the time so they went to burn the pig ...

Another example, from a phone-in programme on Capital Radio, London, has *but* used in a non-binary series:

(7) yeah but you know people keep on saying to you it's best to go for a non-league club but they hold on to you don't they if you're good enough

The co-ordinating structure tends to have fairly short constituent conjuncts, and linear sequencing, rather than subordinating hierarchic embedding in complex sentences, also dominates at the sentential level. These short, co-ordinating units are reflected — except at points where stereotypes such as names, sayings, etc. are inserted – in a kind of intonational patterning which involves more or less prolonged sequences of similar pitch accents in short contours, rather than complex tunes of the types often described in the literature. Perhaps the most common kind of sequence is the step-up-and-sudden-fall accent (Bolinger's accent A) in sequence (cf. Crystal's statistics on disequences, (1969). This basic short-term accentual organisation pattern is conceivably relatable to the rapid-decay type of channel involved. Noticeable differences between spontaneous speech and other types of speech which are more influenced by rehearsal and storage media occur (examples being rehearsed lecturing, reading, academic discussion), which will be taken up in the next section.

Writing, on the other hand, imposes no requirements on simultaneous processing by the addressee (self-monitoring is a different matter), but the fact that writing is a storage facility means that conditions on production, propagation of the signal, and perception, differ from those of speaking; being supported by a storage facility, written communication takes place on a time scale which may be indefinitely extended in the production, transmission and reception phases, and that independently in each case. In particular, this makes extensive editing, both covert and overt (Hockett 1968), possible, without traces of the editing being available to the addressee, in contrast to spontaneous speech. Writing is slow, and frequently not even conceived as a turn-switching dialogue, thus excluding higher-level dialogue strategies, in particular those involving uptake-securing loops (see above) or rapid turn-taking strategies; it also has considerably lower channel capacity (unless variations in handwriting, blots, smudges and tear-stains are into taken account). Writing has a very restricted inventory of metalocutionary devices analogous to the pitch-using systems (a few devices of punctuation and spatial arangement); it is, obviously, intonationless (cf. Joos 1961).

It may be seen that the one variety, speech, lacks storage facilities of the kind available in writing and thus tends to have lower locutionary complexity in comparison with the highly edited variety of writing; on the other hand, it has more structuring at higher levels of dialogue than writing, though these levels tend to be organised in a strictly linear manner with very little hierarchic structure (exceptions being the uptake-securing loops embedded in dialogue, or formal debating-type dialogues). This kind of structuring (or processing, if referred to the actual performance of communicative acts) is signalled by sequences of similar accentual indices, and relatively short-range iconic pitch structuring, which are in general adequate for marking the fairly localised syntagmatic relations at various levels. The other variety, writing, tends to have much higher complexity at the locutionary levels, thanks to the aid which the storage facility provides in editing; despite the lack of metalocutionary signalling of the structures involved, even very complex structures can be reconstructed by the reader because of the uncoupling of the reading and writing processes in terms of time.

In the following section, one particular functional variety which combines both writing and speech will be discussed with respect to the description of English and German intonation; although there are innumerable functional varieties, all of which have their own peculiarities, the variety of reading aloud, though apparently marginal, has a particular importance in the context of applied contrastive linguistics as well as in more theoretical branches of linguistics.

3. A MIXED CHANNEL FUNCTIONAL VARIETY: READING ALOUD

A functional variety which is something of a mongrel with regard to the categories introduced above is that of reading aloud. It may at first glance seem to be a somewhat obscure variety of speech; a glance at some of the standard intonation handbooks will serve to correct this impression, however, at least in respect of the teaching of English and German intonation. Armstrong & Ward stated that

> "attention has been concentrated on the simplest forms of intonation used in conversation and in the reading of narrative prose" (1926:1).

and v. Essen (1956:Vorwort, n.p.) makes the following claim:

> "Sie (die vorgelegte Schrift — DG) will eine Klärung der Intonationsfragen des Hochdeutschen erstreben und besonders dem Studierenden, der Deutsch als Fremdsprache erlernt, eine Hilfe zur Erlernung der auf Bühne und Kanzel, in Vortrag und Rede landesüblichen Sprechmelodie bieten".

Later, and more detailed, descriptions do not explicitly undertake to describe this functional variety; it often turns out, however, that either they do describe such varieties, or else the correlations between the patterns described and the specifications of varieties involved becomes very tenuous. Even Pheby, whose discussion of the variety of German involved in his description is very detailed, relies on participant-related categories coupled with metalinguistic judgments of participants (1975: 30) –

> Sie waren sich ferner in den meisten Fäller darüber einig, daß sie "Hochdeutsch" sprechen –

of a kind which Labov (1966) has shown to be potentially misleading unless treated within a suitably explicit framework, and comes up with a rather sweeping overall characterisation: "Umgangssprache allgemein norddeutscher Prägung". In practice, his description is restricted by his own terms of reference ("Intonation und Grammatik") to areas of language where the sentence-level structuring of locutions is in the foreground, rather than the levels more relevant to the spontaneous speech corpus from which his examples are taken.

The point of discussing the intonation of reading aloud here is not, therefore, for any reason of theoretical priority of whatever sort: it has the pragmatic justification of being one of the most widely described varieties.

The actual intonation patterns used in any given instance of reading aloud are determined by a wide variety of factors and combinations of factors, the channel being only one of these, though an important one. Radio newsreaders and storytellers, for instance, will often simulate hearer-presence (though such cases appear to be rarer on the BBC than on commercial stations) by using relatively short-term accentual structuring, and using dialogue-like intonational metaphors; one instance occurred in a news bulletin on Capital Radio, London, in which such metaphors occurred:

(8) Police are trying to find out who planted the bomb that shattered government offices in in Balham High Road South London early this morning.

The complement clause *who planted the bomb* was not intoned with the "expected" relatively highly structured tune which would match the complexity of the syntax; instead, the item was given a separate overall falling contour with slight lengthening of *bomb* which, when edited out of the overall sequence, was interpretable as a rather aggressive *wh*-question. A further instance was the occurrence of the word *now* with similar "isolate" intonation at the end of a sentence about the expected time of arrival of a politician in London –

(9) .... round about now –

where, in isolation, the edited item *now* was interpretable as an urgent cue to the precise moment for some action to be performed by the addressee. Similar modifying effects are to be found in story-telling directed to children, in which the basic, relatively highly-organised tune patterns are modified in the direction of accent sequencing as found in spontaneous speech by the simple device of increasing the pitch-range, with accented syllables fairly high (low) and unaccented syllables fairly low (high), the preferred pattern being the one indicated in brackets (i.e. low accents, high flanking syllables) except for particular text-structuring purposes when the pattern is reversed. More could be said about such modifications in reading aloud, but that would take us too far. One final comment on the relation of channel influences to other influences may be of interest: particularly at the end of long texts read by a single speaker, the influence of the channel, as opposed to simulated hearer-influence, tends to increase; this is shown by the dominance of the relatively predictable locution-oriented tunes towards the end of such performances, and the relative lack of dialogue-oriented intonation metaphors of the types illustrated in (8) and (9) above. This is hardly surprising, of course, since hearer-simulation presumably means additional effort, and with sustained, and fatiguing, concentration the course of least resistance would appear to be to drop this extra functional dimension.

Figure 2 summarises some of the components required in a model of reading aloud; the modifications due to real or simulated audiences which were discussed above are omitted, and, since this is not intended to be a realistic psycholinguistic model, details pertinent to actual processing in production and perception are not considered. The main question which arises in this connexion pertains to the nature of the inter-channel translation process: this is not a simple interface between codes of two norms, but involves reconstruction of sufficient information from the locutionary intonationless text to provide the basis for metalocutionary structure-spotlighting in the spoken output.

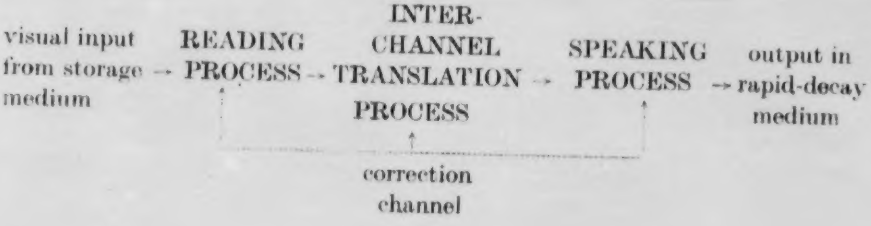

visual input from storage medium
READING PROCESS
INTER-CHANNEL TRANSLATION PROCESS
SPEAKING PROCESS
output in rapid-decay medium
correction channel

Figure 2: Aspects of the channel structure of reading aloud

The kind of information involved may, as already noted in discussing the channel properties of writing, be very intricately structured; this structuring may — at least in a relatively coarse manner — be picked out by intonational means, resulting in a hierarchy of intonational contours and yielding a fair amount of variation of the type represented by some of the more complex tonetic intonation descriptions. The various levels in the hierarchy often appear to follow a principle of contour congruence: the longer stretches (so-called "paragraph intonation", etc.) tend to replicate clausal contours but with greater overall bandwidth or range, thus giving room for lower-level contour-variation. One common pattern starts rather high, and finishes low, thus replicating the standard falling tune types; another pattern is initially rising and then falling over a fairly long stretch, with lower-level rising falling sequences of narrower bandwidth; to go into this in detail would take us too far, however. Various modes of higher-level organisation have been pointed out in the literature (cf. the hints in Pike (1945: 76ff.); Kingdon (1958); also recent discussions such as the notion of *key* in Brazil's work on discourse intonation, 1975, or the "fault intonation" of Ozga (1978); Jassem (1952), also suggested similar variation at a lower hierarchical level, within a long low tail following a falling nucleus; finally, the congruence of the pitch patterns of parentheses with the pattern of the dominating construction has frequently been noted, both for English and German).

It is not difficult to find examples of such hierarchies; BBC newsreaders are a copious source. They are also conspicuous in the reading of stereotyped information such as football results or personalia (name, date of birth, &c.), as well as in non-read, but rehearsed and stereotyped speech varieties such as sports reporting (notably horse-racing), in which a form of storage facility (cf. Figure 1) is also present.

In a sense, it may be said that there even exists a precise theory of reading aloud — though it was not intended to be such, nor can it be considered an empirically adequate theory of this functional variety: the generative theory of stress assignment. If this theory is an empirical theory of anything, then it comes closest to modelling the variety which has just been sketched. This reconstruction of a possible empirical universe of discourse for generative stress-assignment theory should not be confused with naive assumptions that underlying representations in generative phonology are "really" orthography; to maintain such an equivalence would be evidence of fundamental misunderstanding of the nature of the empirical and functional bases of phonological, and here specifically prosodic, descriptions. This cautionary note is perhaps necessary to guard against possible misunderstandings of the present reconstruction.

The reconstruction postulates no more than a functional isomorphism of certain general logical features of (i) the channel structure sketched in Figure 2; (ii) the general structure of the calculus of generative stress assignment; (iii) the general structure of the heuristic strategies on which the interpretation of this calculus is based. As far as the last point is concerned, it is essential to stress that, contrary to the assumption often made, the heuristics used in description, however informal, have a decisive effect on the interpretability of a theory in terms of some universe of discourse. This would be a platitude in the so-called "hard" sciences, but it is often denied, implicitly or explicitly, in linguistics, particularly within the context of formal, explication-oriented descriptions such as those of generative grammar. For this reason, the structure of (iii) above cannot be ignored in trying to provide a match between the output of a theory and the output of an exercise in practical transcription, as in required in trying to sift more abstract properties of intuitively given notions like "stress" from those properties associated with more peripheral perceptual processing.

First, the channel structure of Figure 2 has an input of strings from a storage channel which are processed by means of some translation function into spoken, in particular intoned, sequences.

Second, the structure of the generative calculus is, in general terms, as follows:

(a) the syntactic calculus generates a string of lexical items with *structural* descriptions containing information about certain grammatical categories and relations;

(b) on the basis of this input information, the string is mapped by an interpretive cyclical function on to a string of integers (these being additionally interpreted as specifications of some feature "stress").

These integer strings were, in the earliest stages of generative phonology (Chomsky, Halle and Lakoff (1956: esp. fn 1), intended to have the same kind of direct phonetic reality as was claimed for the Trager and Smith (1951) stress notation which the model was intended to explicate, though with some reservations, for instance about the category of juncture (Chomsky, Halle and Lukoff (1956: Condition II)). Twelve years later (Chomsky and Halle 1968), the continuing lack of such empirical evidence was turned into a virtue: the integer strings were taken to be constructs with some kind of psychological, not directly perceptual reality. This approach no doubt has some justification in view of the fact that the integer strings are, formally speaking, a re-coding of phrase structure in linear form and with reduced information. However, whatever contact with the aspects of stress or accentuation patterns which are perceptually identifiable – regardless of particular constituent structures – in actual dialogue may have originally been hoped for, appears to have been drastically undermined by the vague psychological reality interpretation. A clue to the nature of the universe of discourse of such theories must be sought elsewhere; one source of information, as indicated above, is in the heuristics used.

Third, then, the heuristic strategies used, which became particularly plain in the dispute between Bresnan (1971; 1972), Berman Szamosi (1972), Lakoff (1972) and Bolinger (1972) are, in outline, as follows:

(a) a sentence is invented (on the basis of partly systematic minimal pair strategies) and written down or retained in memory;

(b) informants are requested to read the string aloud; or asked whether they would accept certain readings; or a string retained in memory is assigned a "stress" contour and pronounced.

The judgments reached on the basis of these heuristic strategies are compared with the predictions made by the formal model and taken to be evidence for or against these hypotheses. It is interesting to note that Bierwisch's description of German intonation (1966), for which additional integer strings for pitch patterning are assigned, and which in many respects represents an intermediate stage of development between Chomsky, Halle and Lukoff (1956) and Chomsky and Halle (1968), is quite explicitty concerned with providing an formalization of the v. Essen description of German (Bierwisch (1966:186, fn. 1)), which has already been seen to be concerned with the reading aloud varieties.

The formal parallelism between these three areas is striking, and, with due caution (in view of the possible misunderstanding of the present position in the naive terms referred to above), it may be suggested that *if* this theory of stress assignment has empirical correlates in any variety of English or German (and the descriptions are highly similar for both languages), *then* the variety concerned is that of the reading aloud of contextually isolated written sentences. For it is surely going too far to claim that such a theory describes stress patterning *per se*, and it would appear to be necessary to relativise the universalistic claims made on the part of such theories to more modest, but empirically more meaningful claims about specific functional varieties. But *whether* these theories, on inspection in this regard, have identifiable empirical correlates is an entirely different matter, or *whether* any correlates are functional rather than empirical (making the stress cycle primarily a semantic, rather than a phonetic interpretation, with the integers representing something like the syntactic contribution to Praguean "communicative dynamism" — cf. Gibbon 1975 (1976:96f.), esp. the related conclusion of Lieberman referred to there) is a different matter again, which will not be pursued here.

The main point to be made here, for practical analysis, is that it is not sufficient to consider particular, highly restricted functional varieties of language such as the reading of isolated sentences in a description, and then to draw wide-ranging conclusions about prosodic structuring when, essentially, the only evidence considered is derived from highly inexplicit intuitive interpretations of locutionary structures. Particularly when a practical analysis is intended to bear fruit, as in the context of contrasting linguistics as applied, for instance, to the task of providing materials for language teaching, the functional variety of language used should be stated in the maximum amount of detail, if only to avoid the elementary mistake of contrasting, say, the intonations of spontaneous speech in one language (e.g. one's own, the language one knows best) with the intonations of reading aloud (e.g. in one's second language, which may have been learned primarily via such a functional variety). But it is also necessary to point out that, to coin a phrase, a variety of varieties must be described, taught and learned if a foreign learner is to be able to make the transition from "formal", "stilted" – even if accurate – speech to patterns more appropriate to conversation.

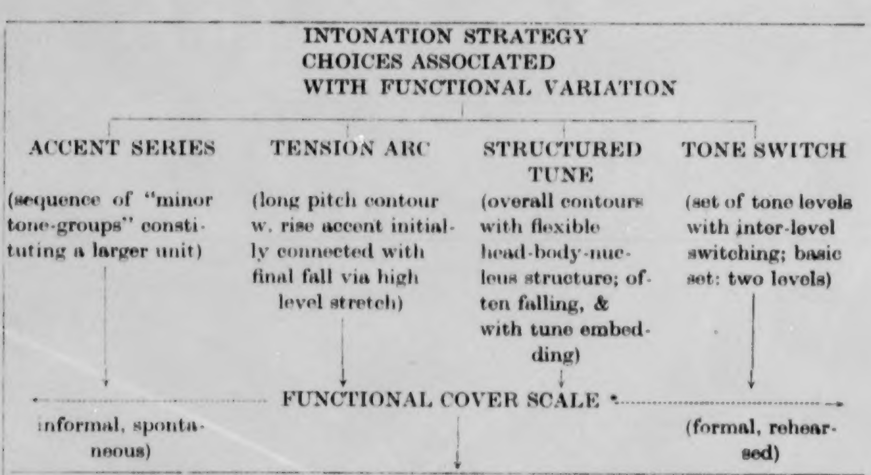
4. FURTHER FUNCTIONAL VARIETIES IN ENGLISH AND GERMAN

An indication of some other factors influencing functional variation both in English and German have already been indicated. On a previous occasion (Gibbon 1978) I suggested a number of theses concerning the description of functional variation in German, which may be summarised in the following terms:

(i) the different, and at first glance mutually incompatible descriptions made hitherto are not so much accurate or inaccurate as fragmentary;
(ii) these descriptions are to a considerable degree complementary to each other in that they make different selections of functional varieties, from reading aloud via rehearsed rhetoric to spontaneous speech;
(iii) the functional varieties selected in each case have specific types of structural organisation which may be prosodically marked in the ways described.

These theses, taken together, amount to a suggestion that some earlier descriptions of German intonation may be used as a source for at least a primitive typology of functional variation in German as it affects intonation. This suggestion may be applied, *mutatis mutandis*, to English intonation, too.

Four such descriptions, with brief references to the functional varieties involved, are listed below and summarised in more detail in Figure 3. They are arranged along a scale of functional or stylistic variation which may be associated with differences in formality or spontaneity; the use of the term "functional" in this context is somewhat broader than in previous sections of the paper. It will be obvious from the discussion (sections 1 and 2 above) of the role of the constitutive factors of communication in defining functions and functional variation that this scale can only be considered


INTONATION STRATEGY CHOICES ASSOCIATED WITH FUNCTIONAL VARIATION
ACCENT SERIES
(sequence of "minor tone-groups" constituting a larger unit)
TENSION ARC
(long pitch contour w. rise accent initially connected with final fall via high level stretch)
STRUCTURED TUNE
(overall contours with flexible head-body-nucleus structure; often falling, & with tune embedding)
TONE SWITCH
(set of tone levels with inter-level switching; basic set: two levels)
FUNCTIONAL COVER SCALE
informal, spontaneous)
(formal, rehearsed)

FUNCTIONALLY MOTIVATED CONTRASTS BETWEEN EXTREMES OF FUNCTIONAL SCALE:

1. Participation structure:	equal interaction	vs. rhetorical roles, speaker domination
2. Syntax:	linear, co-ordinating	vs. hierarchical
3. Metalocution:	selection between all levels	vs. mainly sentential syntax
4. Channel:	rapid-decay/impromptu vs.	vs. read, rehearsed
5. Timing	e.g. isochronism as affective means	vs. isochronism as regular principle

Figure 3: Some functional varieties of German intonation

an informal "cover" scale, with primarily heuristic value as a working hypothesis rather than a finished model; the categories involved are provisional and overlapping. The four descriptions concerned are:

(i) Trim (1959, 1964), which appears particularly appropriate to certain types of spontaneous speech.
(ii) Trojan (1961), whose *Spannungsbogen* (tension arc) model fits coherent narrative strategies and may frequently be heared in political speeches; it may convey appraisive overtones.
(iii) The structured tune model of v. Essen (1956), which is derived in large measure from the work of Armstrong & Ward, Kingdon and Palmer on English intonation, and which may be heard in the reading of relatively highly structured texts and other storage-related functional varieties.
The varieties described by these models are not identical, but they overlap to some extent; it may be possible to regard (ii) as a special version of (iii), for instance, and (i) as containing sequences of substructures of (iii). The fourth variety is slightly different:

(iv) Isacenko & Schädlich (1966, 1970) which, despite much adverse criticism (cf. Gibbon 1975 : § 3.3.2.) of its artificiality and restrictedness, may actually be heard in stereotypic situations, and is associated with "reading something boring out loud", as one informant put it. The following example was recorded from a record request programme on the *Hessischer Rundfunk*.

(10) EIN KLAINES HÜBSCHES GEBURSTAGSLIED FÜR
sielhorst wede
JOHANNA IN BRACK

The base-line is added to make identification of the levels easier. The intonation consists perceptually of long level stretches alternating initially between two pitch heights, then with a third height (higher pitch) which marks the name of the listener involved.

The level-switching model may be formally and functionally related to the chromatic contours (the "stylised" contours mentioned in § 2 above) discussed in Gibbon (1975 : § 4.3.; cf. esp. examples (150)—(184) there), and most recently by Ladd (1978a). These contours are also associated with semantically limited locutions, but (unlike example (10), for instance) they are less integrated into the flow of speech, performing more isolated tasks which may be associated with the "phatic" functions of language in Jakobson's sense (cf. § 1 above), being used in particular to mark uptake-restricted speech, i.e. speech where the "securing of uptake" with regard to the semantic content of utterances is not a strict condition on successful speech act performance (cf. Austin 1962 : 115f.; Gibbon 1975 (1976 : 286f.)). These phatic functions include certain types of calling, routine dialogue-structuring (*danke, bitte; thank you*) particularly in non-informative, non-lingual transactions, repetitive speech, ritualised children's insults (*cowardy cowardy custard*...) play rhymes, and song (Chao 1956).

The specific functionally determined feature of such contours (which I have elsewhere designated "chromatic", cf. Gibbon (1975 : § 4.3.), taking the term from Bachem, 1950) is not simply "level", as proposed by Ladd (1978a); not only does it differ from other phonetic level contours perceptually and functionally, but its syntagmatic structuring differs from other contours, as does its association with functional variants, both in English and German. At the phonetic level, I suggest that a complex (paralinguistic?) feature of degree of perceptual monitoring and control of phonation is involved (in its most extreme form in singing), and that this involvement of perception during production makes the introduction of perceptual interval constants (such as the minor thirds often heard in such contours) possible. This kind of control is the phonetic analogue of the channel-orientation involved in phatic language function; an adequate transcription model might be found in a musical notation.

5. CONCLUSION

Much of the above discussion has been theoretical in nature, though a selection of examples from the material on which the analyses are based has been included for illustrative purposes. The main task was to sketch a somewhat neglected area of language variation which is often implicitly included in general categories of style, register, etc., namely: the kinds of variation due to the attention paid in speech to different types of channel structure, and their influence on the intonation strategies used. The object of this outline was to point out how important it is to take such factors into consideration when contrasting "the" intonation system of "a language" with "the" intonation system of "another language": "the" systems may be phantoms in view of the considerable variety of patterns associated with uses of language (cf. also the comments at the end of § 3 above).

In contrasting German and English intonation, it is often noted that German pitch contours have a higher proportion of level tones, level stretches, jumps between levels rather than glides; that compound tones (fall-rises-, rise-falls & c.) tend to be more infrequent than in English (and, oddly enough, have passed unnoticed by native scholars, first receiving attention from Trim and Pheby), except in dialects (e.g. fall-rises in the northern coastal areas, rise-falls in Swabian and Alemannic areas); or that in intonation-locution relations contours tend to be longer in German, that rise-fall sequencing in that (unmarked) order tends to be more rigidly adhered to and that this is perhaps related to the less rigid word order of German; or that rhythmic rather than pitch contour "integration" of stretches is often used, particularly in public speaking; that certain locutionary devices (subjective adverbs and particles – *doch, wohl, also, ja* ...) tend to have metalocutionary and modal functions in German analogous to those of intonation in English (various analyses by Schubiger, esp. 1965; cf. also Bublitz 1978); that contours for idiomatic phrases, greetings, etc., differ in the two languages (Moulton 1962); that narrower overall pitch bandwidth (without connotations of "boredom", etc.) is used in conversational German; or, finally, that particularly in public speaking there is a long and influential elocution tradition (Sprecherziehung) in Germany with a selective, unifying, prescriptive effect which differs from the traditions which have affected public speaking in England.

Observations such as these, interesting though they are, are doomed to remain quite atomistic until the broader framework of language use is taken into account. The following, final remarks can do no more than point to a number of questions which need to be followed up, and to a tentative set of descriptive categories which pertain to functional variation in language.

The questions to be asked are:

(i) Which functional varieties are intonationally distinguished in the languages concerned; by what criteria are such distinctions identified?
(ii) What are the phonetic and formal characteristics of the intonational subsystems so established?
(iii) What are the principles linking these subsystems to each other and to the constitutive factors of communication?

The preceding discussion is intended to provide partial answers. In conclusion, I should like to suggest as a heuristic tool a generalisation of the notion of functional variation, referring to the constitutive factors introduced in § 2 above, and distinguishing the following kinds of variation:

(i) Channel oriented variation: with/without storage (cf. Fig. 1), with/without technical extension (telephone, radio, script), uptake-restricted (noisy, non-informative) vs. clear.
(ii) Language and context oriented variation: collocational restriction (stereotypic syntax), holistic semantic mapping (idiom in the narrow sense), ritual use (pragmatic stereotypy), each factor separately or interdependently contrasting with unrestricted forms and linking up with the other categories.
(iii) Participant oriented variation: constraints from production, perception and memory and their effect on rehearsed vs. spontaneous speech, writing vs. speech, etc., social conventions on language variety.

As noted in section 1 above, no individual factor can serve alone in constituting a particular function or variety, and consequently any list like this one can only involve an informal weighting towards particular factors, the other factors being simultaneously involved in each case; hence the obvious points of overlap in the list. If these suggestions draw attention towards highly structured areas of communication outside the pale of simple competence/performance or language/speech distinctions with their restricted domains of discourse, and point towards the utility of contrastive analyses based on an explicit empirical and functional frame of reference, they will have achieved their purpose.

Postscript

Some of these views were first presented in a lecture given at the University of Leeds on February 15th 1978; I am especially grateful to Tony Fox and Jack Windsor Lewis for discussion and criticism on that occasion. I am also grateful to the discussants at Boszkowo for not sparing with their criticism and thus motivating certain revisions in presentation for this version of the paper, particularly Janina Ozga, Hans-Heinrich Lieb, Mike Sharwood Smith and Henning Wode.

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NEG–RAISING PREDICATES IN ENGLISH AND POLISH

Ewa Modrzejewska

University of Gdańsk

1. INTRODUCTION

1.1. Fillmore (1963 : 220) proposes a rule which he calls "negative transportation" to account for the relationship between sentences like (1a) and (1b):

1a. Cliff thinks Harry won't win a prize.
1b. Cliff doesn't think Harry will win a prize.

The rule is supposed to raise the negative from the lower clause to the matrix sentence. Both (1a) and (1b) express the same proposition and, as it is pointed out by Sheintuch and Wise (1976), the choice between them is determined by several pragmatic factors, particularly by the speaker's uncertainty about the truth of the proposition expressed in the subordinate clause.

Strictly speaking, sentence (1b) has two readings. One of them is synonymous with the only reading of (1a), and the other can be paraphrased as *It is not the case that Cliff thinks Harry will win a prize.*

As a meaning-preserving rule[1], NEG-Raising (or the Fillmorian "negative transportation") does not relate sentences that convey different propositions:

2a. Cliff claims that Harry won't win a prize.
2b. Cliff doesn't claim that Harry will win a prize.

Thus, not all matrix predicates allow the rule of NEG-Raising to operate. The verb *claim* is an example of a non-neg-raising predicate.

1.2. The aim of this paper is to specify the conditions which have to be satisfied by the matrix predicate in order to let the adjacent negative refer to the lower clause. We will also indicate the differences and similarities between the sets of Polish and English NEG-raising predicates.

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[1] By meaning we understand here propositional meaning. NEG-raising changes the pragmatic meaning of a sentence, which is, in general, the purpose of many other transformations.

2. ARGUMENTS FOR THE EXISTENCE OF NEG–RAISING IN ENGLISH[2,3]

2.0. The fact that certain English sentences are synonymous can be verified by interviewing native speakers of English. However, to state that the sentences are related by means of a transformation requires finding traces of its actual application. The aim of the arguments presented below is to indicate such traces.

2.1. Klima (1964 : 288–9) claims that there are special restrictions on the occurrence of the phrase *until then* as negative sentences with an *until*-phrase do not always have their positive counterparts:

3a. That man didn't get there this time until five o'clock.
3b. *That man got there this time until five o'clock.
4a. The guest didn't arrive until five o'clock.
4b. *The guest arrived until five o'clock.

As (3)–(4) show, the *until*-phrase can appear only with a negative. However, if the predicate covers a broad time span, the *until*-phrase can appear without a negative as in (5):

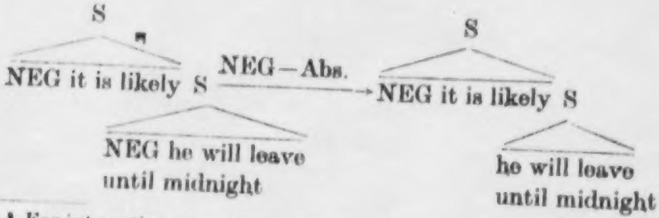
5a. The guests arrived until five o'clock.
5b. The man slept until five o'clock.

Consider the following sentences:

6a. It is likely that he will not leave until midnight.
6b. It is not likely that he will leave until midnight.

Note that sentence (6b) is grammatical despite the fact that *leave* which is a non-durative verb here occurs without negation. Klima (1964 : 292–3) proposes the rule of NEG-Absorption in order to account for the occurrence of *until* in such sentences. The underlying structure of (6b) would be mapped onto the surface structure in the following way:

7.



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[2] For interesting counterexamples to the arguments presented in section 2 see Jackendoff (1971).

[3] We will not present the dialect argument for the existence of NEG-raising proposed by Guy Carden (1971) in his squib "A dialect argument for Not-transportation" published in *Linguistic inquiry 2.*

There are two NEGs in the underlying structure and thanks to the application of NEG-Absorption the NEG in the main clause "absorbs" the lower NEG. Being a meaning-changing rule, however, NEG-Absorption cannot be accepted in the framework of generative semantics as the underlying structure of (6b) would be apparently opposite in meaning to its surface realization.

It has been argued by Masaru Kajita[4] that the NEG in (8) was present only in the underlying structure of the embedded sentence:

8. I didn't think that John would leave until tomorrow.

It was the application of NEG-Raising that caused the transportation of the negative. If not, we would have to claim that the negative has been generated in the matrix sentence and that a structure like **John would leave until tomorrow* could stand alone and be still a grammatical sentence. In other words, we would have to claim that *not* is not necessary for the occurrence of *until*. Sentences like (9) support Kajita's argument:

9. *I didn't say that John would leave until tomorrow.

Here, *not* has been generated in the matrix sentence. This means that *not* negates the verb *say*, and not the phrase *leave until tomorrow. Say* is not "transparent" the way *think* is and the lack of negative environment for the *until*-phrase causes the ungrammaticality.

R. Lakoff (1969 : 141–2) points out that (8) is ungrammatical for many speakers. However, this may be due to the fact that their dialect does not permit NEG-Raising when the matrix predicate is in the past tense. A sentence like (10).

10. I don't think John will leave until tomorrow.

where the matrix predicate is in the present tense, is grammatical for all speakers. Those who accept (8) admit that its synonymity with the lower-neg version is less striking than it is in the case of (10).

2.2. Another argument is given by Lindholm (1969 : 148) who considers sentences similar to the following:

11a. I don't expect Susan will ever become a singer.
11b. *Susan will ever become a singer.
11c. It is not likely that he will lift a finger to help you.
11d. *He will lift a finger to help you.
12a. *I don't claim that Susan will ever become a singer.
12b. *I don't know that he will lift a finger to help you.

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[4] Kajita's argument is presented in R. Lakoff (1969).

The negatives in (11a) and (11c) have been generated in the underlying structures of the subordinate clauses and then transported up to the matrix sentences via NEG-Raising. Otherwise, the complements should be grammatical while standing alone, and they are not as (11b) and (11d) show. The complements contain negative polarity items such as *ever* and *lift a finger* which cannot occur without negation. They are grammatical in (11a) and (11c) because the negatives in the matrix sentences actually refer to the embedded sentences.

Sentences (12a) and (12b) are ungrammatical since they contain base-generated negation that does not refer to the subordinate clauses.

2.3. R. Lakoff's (1969) argument for the existence of NEG-Raising is based on the formation of tag-questions. She claims that tag-questions share some of the properties of simple sentences, certain types of sentences being unacceptable either as tag-questions or yes-no questions:

13a. *Am I worried?
13b. *I'm worried, aren't I?

In the case of verbs of mental state it is nonsensical for the speaker to ask whether they are true of him or not. That is why sentence (14) is also ungrammatical:

14. *I don't suppose the Yankees will win, do I?

Even if the tag referred to the subordinate clause, the sentence would be ungrammatical:

15. *I don't suppose the Yankees will win, won't they?

Unexpectedly, if the tag does not respect the reverse polarity condition, the whole sentence is grammatical:

16. I don't suppose the Yankees will win, will they?

The pronoun *they* and the NP in the lower clause are coreferential. Hence, it is obvious that the tag has been formed on the embedded sentence. However, the tag is positive. Lakoff explains this fact by assuming that the negative particle *not* was present in the embedded sentence by the time the rule of tag question formation operated. Later, the particle was raised to the matrix sentence and the tag remained positive. If it were otherwise, sentences like (17) should be grammatical:

17. *I suppose the Yankees will win, will they?

2.4. Consider the following examples:

18a. I suppose that never before have the media played such a major role in a kidnapping.

18b. I don't suppose that ever before have the media played such a major role in a kidnapping.
18c. I claim that never before have the media played such a major role in a kidnapping.
18d. *I don't claim that ever before have the media played such a major role in a kidnapping.

It is pointed out by Horn (1975 : 284) that the subject-aux inversion can take place in the case of *suppose* and *claim* if the negative is placed in the lower clause. If it is in the matrix sentence, the subject-aux inversion can take place only in the case of *suppose*, that is, in (18b), but not in (18d). The inversion in (18b) has been triggered by the negative in the lower clause. After the application of NEG-Raising the inversion in the complement sentence remained. Such an inversion in (18d) is ungrammatical since the negative does not refer to the lower predicate.

3. ARGUMENTS FOR THE EXISTENCE OF NEG–RAISING IN POLISH

3.0. Since Polish does not form tag-questions the way English does and does not have subject-aux inversion of the kind English has, Lakoff's and Horn's arguments are inapplicable to this language. Let us examine then the remaining two arguments.

3.1. One of the meanings of *aż do* in Polish is equivalent to *until*. If *aż do* is to work in the argument the way *until* does, it must have similar characteristics. Consider the following sentences:

19a. Tomek czytał aż do dziesiątej.
(Tom was reading until ten)
19b. Tomek nie czytał aż do dziesiątej.
(Tom was not reading until ten)
20a. *Grzegorz uderzył Maksa aż do północy.
(Gregory hit Max until midnight)
20b. Grzegorz nie uderzył Maksa aż do północy.
(Gregory did not hit Max until midnight)

As it is shown in (19), a verb in the imperfective aspect covers a broad time span and can occur with or without negation. Polish as well as English punctual verbs behave similarly in respect of *until/aż do*-phrases as is shown in (20).

Let us now consider the following examples:

21a. Wydaje się, że wilk nie szarpnął swej ofiary aż do nadejścia stada.
(It seems that the wolf did not worry its victim until the pack came over)

21b. Nie wydaje się, że wilk szarpnął swą ofiarę aż do nadejścia stada.
(It does not seem that the wolf worried its victim until the pack came over)
22a. Jest pewne, że wilk nie szarpnął swej ofiary aż do nadejścia stada.
(It is certain that the wolf did not worry its victim until the pack came over)
22b. *Nie jest pewne, że wilk szarpnął swą ofiarę aż do nadejścia stada.
(It is not certain that the wolf worried its victim until the pack came over)

Sentence (21b) is grammatical though it might seem that an ungrammatical clause has been embedded into it. The clause **wilk szarpnął swoją ofiarę aż do nadejścia stada* is ungrammatical because the *aż do*-phrase co-occurs with a positive punctual verb. However, this ungrammatical clause together with its matrix sentence forms a grammatical string. It happens so because the negative element actually refers to the embedded clause; thanks to the application of NEG-Raising the negative has been moved up to the matrix sentence. If that were not the case, it would mean that the *aż do*-phrase might occur with a positive perfective verb, which is not true.

Let us now explain why sentence (22b) is ungrammatical. In the case of the matrix predicate *jest pewne* lower-neg and higher-neg versions are not synonymous:

23a. Jest pewne, że wilk nie szarpnął swojej ofiary.
(It is certain that the wolf did not worry its victim)
23b. Nie jest pewne, że wilk szarpnął swoją ofiarę.
(It is not certain that the wolf worried its victim)

The negatives in the above sentences refer to their clause-mate predicates. Thus, in (22b) the negative refers to its clause-mate predicate as well. In such a case there is no negative environment to support the occurrence of the *aż do*-phrase.

3.2. Consider the following examples:

24a. Sądzę, że twój szef nie ruszy palcem by ci pomóc.
(I think that your boss will not lift a finger to help you)
24b. Nie sądzę, że twój szef ruszy palcem by ci pomóc.
(I don't think that your boss will lift a finger to help you)
25a. Twierdzę, że twój szef nie ruszy palcem by ci pomóc.
(I claim that your boss will not lift a finger to help you)
25b. *Nie twierdzę, że twój szef ruszy palcem by ci pomóc.
(I don't claim that your boss will lift a finger to help you)
26a. Wydaje się, że Piotr nie ma złamanego grosza.
(It seems that Peter doesn't have a red cent)

26b. Nie wydaje się, że Piotr ma złamany grosz.
(It doesn't seem that Peter has a red cent)
27a. Twierdzę, że Piotr nie ma złamanego grosza.
(I claim that Peter doesn't have a red cent)
27b. *Nie twierdzę, że Piotr ma złamany grosz.
(I don't claim that Peter has a red cent)

Mieć złamany grosz and *ruszyć palcem* are colloquial Polish negative polarity items, that is, they cannot appear without negation.[5] Sentences (24b) and (26b) are grammatical despite the fact that there are no negatives in the lower clauses. The negatives in the matrix sentences, however, refer to the complement sentences and account for the occurrence of the negative polarity items. If that were not the case, the subordinate sentences should be able to stand alone. As (28) and (29) indicate, such complements are ungrammatical as simple sentences:

28. *Piotr ma złamany grosz.
29. *Twój szef ruszy palcem by ci pomóc.

Sentences (25b) and (27b), as well as (28) and (29), would be acceptable if we understood them literally, and not idiomatically. But even then (25b) and (27b) would not be derived from the respective underlying structures of (25a) and (27a).

4. NEG-RAISING PREDICATES IN ENGLISH

4.1. In the early works on NEG-Raising the set of verbs governing the rule is not clearly defined and contains apparently distinct verbs. Horn (1971 : 120) claims that "while the individual predicates that permit NEG-Raising may vary from language to language — and indeed from idiolect to idiolect — the semantic classes into which such items fall are coherent and the patterns universal". The classes Horn proposes are:

a. predicates of opinion and expectation: *think, expect, believe, be likely, suppose, guess*
b. predicates of intention: *want, choose, intend, feel like*
c. predicates of perceptual approximation: *appear, seem*

Later, Horn (1975 : 292) unites the three classes under the common label of opinion. They occupy the central position on the scale he proposes. The scale divides predicates into three groups according to their perceptible strength:

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[5] Negative polarity items can occur in questions and conditionals as well. However, what is important for our analysis is the non-occurrence of negative polarity items in affirmative sentences.

a. weak predicates
b. mid predicates
c. strong predicates

A sample of Horn's scale is presented below:

30.

able, possible	believe, suppose think, likely seem, appear	know, realize evident, sure
←WEAK—		—STRONG →
may, might can, could	should, want choose, suggest advise, better	must, have to force, make, cause

Horn (1975 : 289) observes that:

a. the negation of a weak predicate will produce a strong predicate
b. the negation of a mid predicate will produce a mid predicate
c. the negation of a strong predicate will produce a weak predicate

R. Lakoff (1969 : 140—1) credits Dwight Bolinger with the observation that higher-neg sentences are used when the speaker is uncertain about the truth of the proposition expressed in the complement. Thus, as G. Lakoff (1970 : 158) points out, factive verbs never raise NEGs since it is presupposed that their subject knows that the complement of a factive verb is true and he cannot be uncertain about it. Implicatives are excluded from the set of NEG-raising predicates for the same reason.

The predicates in the middle of Horn's scale are neither factive nor implicative, whereas in the case of weak and strong predicates either their positive or negative forms are factive or implicative. Mid-scalars remain non-factive and non-implicative even if they are negated and that is why they can raise NEGs.

The mid-scalar condition must be satisfied by all NEG-raisers, but it is not a sufficient condition. For example, the verbs *try* and *attempt* are mid-scalars but they are excluded from the set of NEG-raising predicates since they cannot express opinion and for that reason they do not have anything to do with the speaker's attitude of certainty or uncertainty.

4.2. Prince (1976 : 425—6) suggests that NEG-raisers behave in a way similar to performatives — both prefer the first person present non-progressive. Hence, if the predicate is in the progressive aspect, it will not allow NEG-Raising to operate even if it satisfies the mid-scalar condition:

31. *I'm not guessing you like roast goose, do you?

In Prince's terms the verb *guess* in (31) is understood "literally", and not "metaphorically".

Similarly, if the predicate is in the future tense, it will be understood literally:

32. *I will not think that John will leave until tomorrow.

As we mentioned in section 2.1., some speakers do not accept predicates in the past as NEG-raisers, i.e., they do not interpret them metaphorically:

33. ? I didn't think that John would leave until tomorrow.

4.3. In this section, we will try to unite the observations made by Horn and Prince.

A mid-scalar predicate may have several meanings, but it must also have the meaning "hold the opinion". This meaning is noticeable only if the predicate satisfies a number of various conditions. Only some of them may be ignored by certain speakers. Less "tolerant" speakers, for example, will not interpret predicates as "hold the opinion" even if one of the conditions is not satisfied. Some of the conditions are then obligatory for all speakers, and two of them, marked "optional", are obligatory only for some speakers:

A. oblig — the mid-scalar condition satisfied (factives and implicatives are excluded)
B. oblig — the verb can be interpreted as "hold the opinion" (thus *try* and *attempt* are excluded)
C. oblig — non-progressive
D. oblig — non-future
E. opt — the first person
F. opt — non-past

Thanks to such a description of a NEG-raising predicate we can avoid formulating strict syntactic constraints that are hardly capable of grasping its elusive boundaries. The following words taken from Prince (1976 : 426) appear to advocate such a solution: "An indirect-discourse context alters the restriction [our E and F] in ways that are totally predictable if they are seen as stemming from the speech situation, but which are inexplicable as formal syntactic restrictions."

5. NEG RAISING PREDICATES IN POLISH

Chcieć ('want') and *sądzić* ('think', 'be of the opinion') are the only Polish NEG-raisers mentioned in the linguistic literature (see, for example, Wierzbicka (1969) and Fisiak et al (1978).)They are not the only Polish NEG-raisers.

In the following sentences the shift of the negative does not change the propositional meaning, which indicates that the matrix predicates belong to NEG-raisers:

34a. Wierzę, że nadzieja was nie opuszcza.
(I believe that you dont' give up hope)
34b. Nie wierzę, że nadzieja was opuszcza.
(I don't believe that you give up hope)
35a. Radzę wam, żebyście nie odchodzili za daleko.
(I advise you not to go too far)
35b. Nie radzę wam, żebyście odchodzili za daleko.
(I dont' advise you to go too far)
36a. Mamę zamiar nie jechać do Anglii.
(I intend not to go to England)
36b. Nie mam zamiaru jechać do Anglii.
(I don't intend to go to England)
37a. Jest wskazane nie zwracać na siebie uwagi.
(It is advisable not to attract attention)
37b. Nie jest wskazane zwracać na siebie uwagę.
(It is not advisable to atttract attention)
38a. Wyobrażam sobie, że ich poglądy nie różnią się tak bardzo od moich.
(I imagine that their views dont' differ from mine so much)
38b. Nie wyobrażam sobie, że ich poglądy różnią się tak bardzo od moich.
(I don't imagine that their views differ from mine so much)

Uważać ('be of the opinion'), *życzyć sobie* ('wish'), *powinien* ('should'), *spodziewać się* ('expect'), *wątpić* ('doubt'), *przypuszczać* ('suppose'), and *wydawać się* ('seem') are other examples of Polish NEG-raisers. Several Polish predicates, however, do not raise NEGs despite the fact that their English equivalents are NEG-raisers: *zakładać* ('assume'), *wnioskować* ('conclude'), *lepiej* ('better'), *być dobrym pomysłem* ('be a good idea'), *sugerować* ('suggest'), *woleć* ('choose'), *oczekiwać* ('expect', 'await') and *zgadywać* ('guess'). This is caused by the fact that the above Polish predicates are not able to express opinion though in other senses they are equivalent to their English counterparts.

Let us now consider following examples:

39.a Będę myślała, że nie ma ich w domu
(I will think that they are not at home)
39b. Nie będę myślała, że są w domu.
(I won't think that they are at home)

Sentences (39a) and (39b) are not synonymous. The verb *myśleć* in the future tense denotes a mental activity rather than "holding the opinion". In other words, it is used in its literal sense and cannot raise NEGs.

A possible scale constructed for Polish verbs shows that Polish NEG-raisers occupy its middle part:

40. jest możliwe być zdolnym	wydawać się, jest prawdopodobne, przypuszczać, sądzić, myśleć	wiedzieć, jest pewne, jest oczywiste
←WEAK–		–STRONG→
móc, potrafić pozwalać	chcieć, powinien radzić, mieć zamiar	musieć, zmusić

Similarly as in English, Polish mid-scalars are neither factive nor implicative.

If the matrix subject is in the third person, the synonymity is less obvious than it is in the case of the first person. Consider, for example, the following sentences:

41a. Piotr przypuszcza, że transformacje nie istnieją.
(Peter supposes that transformations don't exist)
41b. Piotr nie przypuszcza, że transformacje istnieją.
(Peter doesn't suppose that transformations exist)
42a. Przypuszczam, że transformacje nie istnieją.
(I suppose that transformations dont' exist)
42b. Nie przypuszczam, że transformacje istnieją.
(I dont' suppose that transformations exist)

6. CONCLUSIONS

6.1. Roughly speaking, the sets of Polish and English NEG-raising overlap. However, the number of Polish predicates that can express opinion is smaller and for this reason many English NEG-raisers do not have separate Polish equivalents.

6.2. The conditions that must be satisfied by NEG-raising predicates are common for English and Polish. Since Polish does not have any formal distinction between progressive and the non-progressive aspect, condition *C* is irrelevant in this language.

APPENDIX

English and Polish
NEG-Raising Predicates

A. English NEG-raising predicates:

advisable
advise
anticipate
appear
assume
be a good idea
be likely
be probable
be true
better
care
choose
conclude
consider
desirable
expect

fancy
feel like
figure
guess
intend

ought to, should
presume
presuppose
reckon

seem
suggest
supposed to
take it for granted

think
turn out
want
wish

B. Polish NEG-raising predicates:

być zdania ('be of the opinion')
chcieć ('want')
mieć (as in *mieć coś zrobić* = 'to be to do something')
mieć ochotę ('feel like')
mieć zamiar ('intend')
? mniemać ('be of the opinion')
myśleć ('think')
powinien ('should')
pożądane ('desirable')
prawdopodobne ('probable', 'likely')
przypuszczać ('suppose')

radzić ('advise')
sądzić ('think', 'be of the opinion')
spodziewać się ('expect')
uważać ('be of the opinion')
wątpić ('doubt')
wierzyć ('believe')
wydawać się ('seem', 'appear')
wyobrażać sobie ('imagine')
wskazane ('advisable')
zdawać się ('seem', 'appear')
życzyć sobie ('wish')

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ON *COMING* AND *GOING* IN ENGLISH AND GERMAN

GISA RAUH

University of Göttingen

In several of his works C. J. Fillmore has pointed out the deictic nature of the motion verbs *come* and *go* in English (Fillmore 1966, 1970, 1971a, 1971, 1972)[1]. Unlike the motion verbs *run* or *fly*, for example, *come* and *go* carry no information concerning the manner or means of a movement; they simply express motion from one place to another, whereby, however, they may indicate information about the source and the goal of the movement, inforation which is not derivable from the linguistic context but from the situation in which a sentence is uttered. Such deictic information concerns the identity of the speaker, the coding place and the coding time of a locutionary act and the identity of the addressee, and if the communication takes place via letter or telephone, the decoding time and the decoding place of the locutionary act.[2] Fillmore points out that *come* indicates motion toward the location of the speaker or the addressee at either coding time or reference time (Fillmore 1971a:68) and *go* indicates motion toward a location which is distinct from the speaker's location at coding time (Fillmore 1971a:53). Thus the use of *come* in (1)

(1) He comes to the office tomorrow.

predicts that either the speaker or the addressee are located at the reference place at either coding time or reference time. If this is not the case *go* must appear in this context.

A superficial investigation of German *kommen* and *gehen* seems to lead to similar results as far as the deictic nature of these verbs is concerned. Thorough investigation, however, brings out a difference which is relevant for *kommen* and *gehen* in contexts where change of place implies change of state, and where *kommen* and *gehen* do not behave like *come* and *go*. The generalizations which have to be made for the German verbs in this area differ considerably from those which E. Clark (1974) suggests for the English verbs, which will be discussed later.

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[1] A review of Fillmore's analysis of *come* is presented by G. Cinque (1973).

[2] For more discussion of deixis see C. J. Fillmore (1971, 1971a) and G. Rauh (1978).

This paper presents an investigation and comparison of the use of German *kommen* and *gehen* and English *come* and *go* as motion verbs and as verbs of change of state or change of place in those contexts where both verbs may occur, that is, in sentences which may be considered as minimal pairs. It is not intended to give a full semantic analysis of the verbs in question nor is the concern of this paper to present an explanation for all occurrences of either *kommen* or *gehen* even where they express change of state; and the generalizations achieved hold only for cases in which *kommen* and *gehen* occur in minimal pairs.

If the analysis of *kommen* and *gehen* is first restricted to their use as motion verbs, the motion being performed by a person or thing, *kommen* like English *come*, indicates motion towards speaker's location, addressee's location or speaker and addressee's location if they are located at the same place at either coding or reference time. Thus for an utterance of (2)

(2) Franz muß gleich kommen.
Franz will come soon.

the following situations are possible. Speaker and addressee are both located at the coding place at coding time and the speaker announces the expected arrival of a person named *Franz*. If the communication takes place via telephone then the place of *Franz*. arrival can be either the speaker's or the addressee's location. Without any context information, sentence (2) is three ways ambiguous and may be disambiguated by adding complements which express the deictic goal of the motion performed by Franz. Thus, sentences (3), (4) and (5), respectively, describe these possible situations:

(3) Franz muß gleich zu uns kommen.
Franz will come to us soon.
(4) Franz muß gleich zu mir kommen.
Franz will come to me soon.
(5) Franz muß gleich zu dir kommen.
Franz will come to you soon.

The occurrence of the pronouns *uns*, *mir*, *dir* as constituents of the preposition phrases determines the goal of the movement as a deictically specified place. If instead of a deictic preposition phrase a sentence contains a nondeictic expression to indicate the reference place, as in (6)

(6) Kommt Paul Sonntag auch ins Theater?
Will Paul come to the theatre on Sunday?

then the occurience of *kommen* predicts that either speaker or addressee or both will be at the reference place (*Theater*) at reference time (*Sonntag*). Reference place and deictic place as either speaker's or addressee's location at reference time are identical.
The replacement of *kommen* by *gehen* in (6) changes the situation in such a way that now neither speaker nor addressee have to be at the reference place at reference time. This, however, does not mean that they must not be there under any circumstances, since a question like (7)

(7) Geht Paul Sonntag auch ins Theater?
Will Paul go to the theatre on Sunday?

may lead to further statements such as (8) or (9)

(8) Dann gehe ich auch.
Then I'll go, too.
(9) Dann geh du doch auch.
Then, why don't you go, too?

which may prepare a final situation where speaker, addressee and a person named Paul meet at the indicated place at reference time. Analogous examples can also be found in English. It may be deduced, therefore, that with *kommen* in this context the goal of the movement has deictic qualities, while with *gehen* no deictic qualities can be distinguished. In sentences (7) – (9) it is not the goal of the movement which is relevant but rather the fact that a movement has been or is going to be performed. If one of the two prominent points of a movement, source and goal, has any relevance at all in the context of *gehen*, then this is the starting point or the source, as the following contrasting examples demonstrate:

(10) Ich komme jetzt.
I'm coming.
(11) Ich gehe jetzt.
I'm leaving.

Since the goal of *kommen* is either speaker's or addressee's location and since it is not possible for the speaker to move towards his own location (unless his home base is meant), sentence (10) predictably expresses movement towards the addressee's location. A paraphrase for (10) is therefore (12):

(12) Ich komme jetzt zu dir.
I'm coming to you now.

In (11), however, the goal of the movement is not predictable, but the source is, that is, the source of the movement expressed in (11) is the speaker's location.

Predictability of the source of the movement in sentences with *gehen* and of the goal in sentences with *kommen* is the reason why both source and goal are specified, and thus identifiable, if sentences with *gehen* contain a complement indicating the goal and sentences with *kommen* contain a complement indicating the source. In (13) and (14)

(13) Ich komme vom Bahnhof.
I'm coming from the station.
(14) Ich gehe zum Bahnhof.
I'm going to the station.

both source and goal of the movement are specified. Predictability of the deictic source of a movement in the context of *gehen* is, however, not only guaranteed if the person who performs the movement is either the speaker or the addressee as G. Wotjak (1971) in his attempt to present a semantic analysis of *kommen* and *gehen* would like to have us believe. His argument goes as follows: German *gehen* as a verb of motion indicates movement towards a location where neither speaker nor addressee are located; and since speaker and addressee are always simultaneously present at the same place, i.e. the location of the locutionary act, *gehen* always expresses withdrawing oneself ("Sich-Entfernen" (Wotjak 1971:218)). German *kommen*, however, indicates movement towards the place where speaker and /or addressee are located. Thus, so Wotjak's argument goes, *kommen* expresses an approach to the goal of the movement where speaker and/or addressee are felt to be located. But, and this is the main point to be challenged, the direction of the movement indicated by either *kommen* or *gehen* is neutralized if the movement is performed by neither speaker nor addressee but by a third person. Wotjak concludes that in these cases *kommen* and *gehen* can substitute for each other without evident difference in meaning (Wotjak 1971:208f).

First of all, the claim does not hold that speaker and addressee are always simultaneously present at the same place, the location of the locutionary act, since there exist such locutionary acts as telephone calls and letter writing, where speaker and addressee obviously occupy different places. Sentence (15)

(15) Wann gehst du?
When are you going?

uttered during a telephone conversation questions the time when the addressee is leaving his location, which is distinct from that of the speaker at coding time. Secondly, it is not true that in such cases where neither speaker nor addressee are involved in performing a movement expressed by either *kommen* or *gehen*, that is, if a third person is performing the movement, the direction of the movement is no longer predictable and *kommen* and *gehen* may be substituted for one another without any difference in meaning. This false conclusion of Wotjak's is probably due to his wrong assumption concerning the location of speaker and addressee at coding time, Thus sentence (16)

(16) Peter geht jetzt.
Peter is leaving now.

expresses indeed that a person named *Peter* is leaving a place where the speaker is located at coding time. However, the indicated source of the movement need not be the immediate, rather restricted space occupied by the speaker but it may just as well be a larger area surrounding him. Thus (16) could very well be uttered in a situation where the speaker observes a person stepping out of the door of a building opposite, and leaving. In this case, the exact starting point as the source of the movement is not predictable, but the overall area is, which is the referent of deictic *here* in what Fillmore calls its "symbolic" use as opposed to its "gestural" use, the latter referring to the immediate space occupied by the speaker (see Fillmore 1971:226f). That the deictic qualities of *kommen* and *gehen* are not neutralized if a third person performs the action, as Wotjak claims, becomes obvious if *gehen* in (16) is replaced by *kommen* as in (17),

(17) Peter kommt jetzt.
Peter is coming.

which expresses that a movement towards speaker's location is being performed. Thus, in all examples analyzed so far, independent of the role of the person who performs the movement, in the sentences with *gehen* the source of the movement is in focus, whereas in those with *kommen* it is the goal of the movement. Examples (18) and (19) also provide evidence for this claim and, furthermore, demonstrate that the movement may even be performed by an object, that is, it is not restricted to persons:

(18) Wann geht der Zug nach Hannover?
When does the train for Hanover leave?
(19) Wann kommt der Zug nach Hannover?
When does the train for Hanover arrive?

The object which performs the movement is the train for Hanover. (18) questions about the departure and (19) about the arrival of the train. Both sentences may be uttered at the station, source and goal of the movement in this case being more or less the immediate space occupied by the speaker, but they also may be uttered in the town or city which includes both the station and the speaker's location. The deictically specified location is thus the whole city. If the station as the source or the goal of the movement is in a town or city which is not at the same time the location of the speaker, then (18) and (19) cannot be used, but in a sentence with *gehen* the source of the movement must be mentioned and in a sentence with *kommen* the goal, as in (20) and (21) respectively:

(20) Wann geht der Zug nach Hannover von Hamburg?
When does the train for Hanover leave Hamburg?
(21) Wann kommt der Zug nach Hannover nach Hamburg?
When does the train for Hanover arrive in Hamburg?

So far, everything which has been said about *kommen* and *gehen* also holds for *come* and *go*.[3] This means that Fillmore's hypotheses about *come* and *go* (see p. 55) also characterize *kommen* and *gehen*. The examples presented so far describe situations where a person or thing performs a movement and where either the source or the goal of the movement are specified. If there is no reference place mentioned in a sentence then the identification takes place via deictic information. In the case of goal-oriented *kommen* the goal of the movement is identified, in the case of source-oriented *gehen* the source of the movement is identified. Both source and goal are identified if the sentences contain the necessary complements as in (13) and (14). If a sentence with *kommen* contains an adverbial to indicate the goal of the movement, it was said that, as with English *come*, reference place and deictic goal are identical. However, in German there are significant exceptions to the rule. In (22)

(22) Bill comes from London to New York.

the reference place New York is also, due to *come*, the location of either the the speaker or the addressee. The German equivalent

(23) Bill kommt von London nach New York.

may but need not provide information about the location of speaker or addressee. If source and goal of a movement are specified by adverbials, then the deictic information of *kommen* concerning the goal may be neutralized. What remains, though, is goal-orientation, that is, the goal of the movement expressed by an adverbial is in focus. Thus a sentence like (24)

(24) Der Händler kommt jeden Samstag von Hamburg nach Göttingen.
Every Saturday the salesman goes from Hamburg to Göttingen.

may be uttered in Hamburg, in Göttingen or anywhere else. Substituting *gehen* for *kommen* in an otherwise identical context

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[3] Similar observations have also been made for the equivalents in Italian (Cinque 1971) and Hindi (Sinha 1972).

(25) Der Händler geht jeden Samstag von Hamburg nach Göttingen.
Every Saturday the salesman goes from Hamburg to Göttingen.

demonstrates that now goal-orientation is no longer present. Source and goal have the same importance; *gehen* in this context only indicates the movement.[4]

Neutralization of the deictic feature of *kommen* seems to be possible whenever an adverbial complement identifies the goal of the movement. Even in sentence (6),

(6) Kommt Paul Sonntag auch ins Theater?
Will Paul come to the theatre on Sunday?

which was correctly analyzed as carrying the information that either speaker or addressee will be at the reference place at reference time, it is not quite clear, whether this information is due to *kommen* or rather to the particle *auch*. Other examples with *kommen*, in which no disturbing particle occurs, make no prediction about the location of speaker and addressee. The question

(26) Kommst du heute in die Stadt?
Are you going to town today?

in contrast to

(27) Gehst du heute in die Stadt?
Are you going to town today?

simply expresses that the goal of the movement is in focus. The same holds true for the following sentence:

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[4] Contrary to the characterization of *gehen* presented here, G. Wotjak supposed that *gehen* is goal-oriented (Wotjak 1971:209f). Wotjak develops his arguments comparing (1) and (2)

(1) Er geht nach Leipzig.
He is going to Leipzig.
(2)* Er geht aus Leipzig.
* He is going from Leipzig.

The difference between the two characterizations of *gehen* is obviously one of the definition of the term 'goal-orientation'. Goal-orientation in (1) is indicated by the adverbial *nach Leipzig*, not by the verb *gehen* itself. Sentence (3) provides evidence,

(3) Er geht aus Leipzig fort.
He is leaving Leipzig.

where the addition of the particle *fort* changes (2) to a grammatical sentence. Thus according to Wotjak's definition *gehen* in (3) would have to be called source-oriented due to the change of the preposition phrase. But this, of course, cannot be what Wotjak would like to say and, therefore, *gehen* inherently is rather source- than goal-oriented and takes a complement indicating the goal of the movement to express both prominent points, source and goal, of a movement.

(28) Ich bin noch nie nach Japan gekommen.
I have never got to Japan.

In such contexts as (26) and (28) in English it is not possible for *come* to occur. In English the deictic feature of *come* is resistant whereas with German *kommen* this feature can be neutralized if a sentence contains an adverbial which specifies the goal of the movement. Thus with *kommen* the goal of the movement must always be specified, which obviously is the reason why *kommen* has been called "goal-oriented". It is deictically specified as speaker' s and/or addressee's location at either coding time or reference time in those cases where a sentence does not contain any adverbial complements indicating the goal of the movement. But it may also be specified by an adverbial referring to the non-deictic goal of the movement. In the latter case the deictic feature of *kommen* can be neutralized.

As E. Clark (1974) has pointed out, the deictic feature of *come* is not only resistant in contexts which express physical movement, but also in figurative uses in the sense of 'change of state'. A normal state is predictable just as deictic information about the location of speaker and addressee in a speech act situation is. The change from a normal state to a state deviating from the norm is indicated by *go* while movement towards the normal state is indicated by *come*:

(29) Jane's temperature went up today.
(30) Jane's temperature came down today.

The indicated deviation from the norm here is 'high temperature'. If it is 'low temperature' the following pair of sentences is appropriate:

(31) Jane's temperature went down today.
(32) Jane's temperature came up today.

Such regularity, which E. Clark states for recurrent normal states as in (29)—(32), as well as for non-recurrent normal states, where *come* is used for entrance boundary states, e.g. 'legal adulthood' in (33)

(33) Martin came of age in 1975.

and *go* for exit boundary states, as e.g. 'Freshness' or 'edibility' in (34) and (35) respectively,

(34) The bread went stale.
(35) The fruit has gone bad.

cannot be observed in German. Both entering and leaving a recurrent normal state may be indicated by *kommen* The direction of the movement or change is expressed by the accompanying preposition and not by substituting *gehen* for *kommen* as the following phrases demonstrate:

(36) von Kräften kommen — lose one's strength
zu Kräften kommen — gain one's strength
von Sinnen kommen — lose one's senses
zur Besinnung kommen — come to one's senses
außer Atem kommen — start panting
zu Atem kommen — catch one's breath again
aus der Fassung kommen — lose self-control
zur Fassung kommen — gain self-control

Unlike English *come* German *kommen* may express change from exit boundary states as in the rather archaic expression *in Verfall kommen* used in (37):

(37) Das Haus ist in Verfall gekommen.
The house decayed.

Another regularity which E. Clark observed in the use of *come* and *go* is related to evaluative viewpoints. Thus an expression containing *come* carries with it a positive connotation while the choice of *go* in the same context carries a neutral or negative connotation:

(38) Look at all he came through!
(39) Look at all he went through!
(40) The show came off last night.
(41) The show went off last night.

Here again no corresponding observations can be made for German *kommen* and *gehen*. *Kommen* as well as *gehen* may be used in expressions which carry with them negative connotation:

(42) auf den Hund kommen — go to the dogs
an den Bettelstab kommen — be reduced to poverty
jemandem auf den Leim gehen — fall into a p.'s trap
jemandem ins Garn gehen — fall into a p.'s trap

Both *kommen* and *gehen* may also be used in expressions which carry with them positive connotation:

(43) Peters Traum ist in Erfüllung gegangen.
Peter's dream came true.
(44) Franz ist zu Reichtum gekommen.
Franz became rich.

Whereas in English the goal or result of a movement is predictable in a sentence containing *come*, that is, predictable as the normal state or an ameliorative evaluation, this is not the case with German *kommen*. However, as in the case of *kommen* as a motion verb, the observation can be made that in the context of *kommen* as a verb of change of state the goal or result of the change is specified. The use of *kommen* indicates that a new state has been or is about to be achieved. The new state is also specified in those expressions of (36) which indicate deviation from the normal state, since normal state and non-normal state are understood as complementary. *Außer Atem kommen* identifies a state where a person does not breathe normally and *von Sinnen kommen* identifies a non-normal psychic state. Specification of a goal or result and achievement of a new identified or identifiable state is, then, a regular difference between *kommen* and *gehen* in those contexts which allow a choice between the two. The choice of *gehen* here indicates that the goal or result is still unspecified or, at least, has not been reached yet. To say

(45) Ich bin der Sache auf den Grund gekommen.
I have got to the bottom of the matter.

means that one has got to the bottom of a matter. The investigation is completed. The concentration on the goal or result, however, is not simply a result of the present perfect tense used in (45), as one might suspect. If the reference time is the future, as in (46) and (47),

(46) Ich komme der Sache auf den Grund.
I'll get to the bottom of the matter.
(47) Ich werde der Sache auf den Grund kommen.
I'll get to the bottom of the matter.

these sentences may be used as a threat meaning "I'll find out" or, in other words, with the implication that the investigation will be successful. However, in (48)

(48) Ich werde der Sache auf den Grund gehen.
I'll investigate the matter.

nothing is said about the final results. It expresses only that the speaker is ready to devote his time to the investigation. The same is true for sentences (49) and (50)

(49) Ich komme ihm auf die Spur.
I am on his track.
(50) Ich gehe ihm auf die Spur.
I shall look for his track.

Sentence (49) is result-oriented, meaning that the speaker is or at least believes he is close to the result he is after, while sentence (50) is either source-oriented, meaning that the speaker sets out to achieve the indicated result or he is already involved in the investigation without knowing how far he still has to go.

There is another regularity concerning *kommen* and *gehen* in contexts where they contrast. One aspect of this has been observed by W. Schmidt (1967:39f). Where *kommen* and *gehen* express change of place in the sense of transfer from one place which includes the place of employment to another which includes the new place of employment *gehen* carries with it the connotation that the change is due to the performer's own decision whereas *kommen* implies that some other person has made the decision and the performer is the patient rather than the instigator. Thus (51)

(51) Ich gehe nach Berlin.
I go to Berlin.

indicates that the change of place is a result of the speaker's decision. If, however, a person has applied for a job in different places and has received a positive answer only from Berlin, then sentence (52) appropriately describes the circumstances:

(52) Ich komme nach Berlin.

In this case the decision was made without the speaker's having any influence on it.

To find themselves in such a situation is very typical for young men who get drafted into the army. Their first experience with this institution is that decisions are made for them. Unless they have connections with influential persons, they have no part in deciding whether to join the army, navy or air force, nor can they choose the military base to which they are sent. Thus commonly heard expressions are:

(53) Ich komme zur Marine.
I'll join the navy.
(54) Ich komme zu den Fliegern.
I'll join the air force.
(55) Er kommt zu den Panzern.
He'll join the tank corps.
(56) Er kommt nach Kiel.
He'll be stationed in Kiel.

Replacement of *kommen* by *gehen* in (53)—(56) would imply that the recruit was given a choice and has made his own decision. The fact that in these contexts *gehen* indicates decision on the performer's part, predicts that in these sentences names for non-animate objects must not occur in subject position. If change of place is expressed for e.g. an institution, only *kommen* is appropriate:

(57) Das neue Institut $\left\{\begin{array}{c}\text{*geht}\\ \text{kommt}\end{array}\right\}$ nach Berlin.

A more general approach than that suggested by Schmidt may be found by examining the following examples. Except for (57), the previous examples describe situations in which a person is the patient of a change, a change of place, status or situation. If the change is caused by the involved person himself, this is indicated by *gehen*; if this is not case, *kommen* characterizes the situation appropriately. If a person is involved as the patient a change and he himself is not the cause of the change, then other causes can be thought of than only a deliberate decision on the part of another person. A change may be caused by natural law, legal regulation, specified or unspecified circumstances. In such cases where decision on the patient's part may contrast with changes decided on outside the area of his influence, this distinction in German is indicated by *gehen* and *kommen*, respectively.

Entry into human existence is a natural event independent of the decision of the person who undergoes, it. Thus *kommen* is the appropriate word to indicate this change of state:

(58) auf die Welt kommen — be born

Although humans have no choice at all in their achieving human status, some events in cultural history present an exception. For instance, (659)

(59) Er ist in die Welt gegangen.
He went into the world.

is inappropriate in the context of birth except when the reference is to the self-incarnation of a deity, as in the persons of Jesus Christ or Zeus, for example.

Legal regulations determine the time when a child has to enter school. If a question is designed to find out, when a child has reached the legal age for entering school, (60) is appropriate,

(60) Wann kommt er zur Schule?
When will he enter school?

if the question is (61)

(61) Wann geht er zur Schule?
When does he go to school?

the questioner will be asking "when is he leaving today" or "... usually". The leaving time, then, is not exactly pre-determined but may be set by the child, since he knows the length of the way and the time it will take him to arrive at school on time.

Specified circumstances may be mentioned as the cause of a motion or change of state. A mother may promise her children a desired place or threaten them with their finally ending up at an undesirable place, so as to cause them to behave well, by uttering (62) and (63) respectively:

(62) Kinder, die artig sind, kommen in den Himmel.
Children who behave well go to heaven.
(63) Kinder, die unartig sind, kommen in die Hölle.
Children who don't behave well go to hell.

The predicted movement escapes the direct influence of those who are said to perform it. They are the patients rather than the instigators. However, their previous behaviour provides the circumstances which are said to cause the change of place. Since heaven and hell are not places where humans can normally go on their own decision, the gap for *gehen* in this context is not accidental but predictable.

The circumstances which lead to a change of state may be unspecified. When referring to a person's accidental death, (64) is an appropriate statement:

(64) Er ist ums Leben gekommen.
He has died.

If a person, however, caused his own death, that is, he committed suicide, the change of state is expressed by *gehen* as in (65):

(65) Er ist aus dem Leben gegangen.
He committed suicide.

Likewise unspecified are the circumstances which have caused the state which a speaker describes in uttering (66):

(66) Er ist mir aus den Augen gekommen.
I have lost sight of him.

The speaker expresses the fact that he has lost sight of a person. If the person involved, however, deliberately avoids the speaker, then (67)

(67) Er ist mir aus den Augen gegangen.
He keeps avoiding me.

appropriately describes the situation. A syntactic consequence of the fact that, of the previous sentences, only those with *gehen* carry the connotation that the person involved in a change of place or state caused the change himself or has some influence on it, is that only these sentences can have a corresponding imperative form. Whereas (68) and (69) are grammatical

(68) Geh zur Schule!
Go to school!
(69) Geh mir aus den Augen!
Get away from me!

(70) and (71)

(70) *Komm zur Schule!
Enter school!
(71) *Komm mir aus den Augen!
Keep avoiding me!

are not in this context. They are grammatical, of course, if *kommen* is used as a verb of motion.

At this point, it seems, a generalization can be made concerning the use of *kommen* and *gehen* as verbs which express change of place or change of state. In contrasting contexts, the use of *gehen* predicts that a person is involved in the change and, furthermore, that he is the cause of the change. With *kommen* no predictions about the cause can be made. As has been demonstrated, the cause may be another person, natural laws, legal regulations, specified or unspecified circumstances. However, with the use of *kommen*, unlike *gehen*, the result of the change or the goal of the movement is in focus, rather than its cause or its source. Syntactic evidence for this claim may be seen in the fact that the sentences in question do not have corresponding imperatives. As G. Lakoff (1966, 1970) pointed out, this is a characteristic of stative verbs. In those sentences which express a change of state and which contain *kommen* the focus is neither on the cause nor on the change but on the resulting state. Thus, it may be suggested that these sentences should not be analyzed as having a verb of motion *kommen* and an adverbial indicating the goal of the movement but *kommen* together with the adverbial constitutes a unit with stative characteristics.[5] This seems to be the basis for many idiomatic terms in German all designed according to the same pattern, where *kommen* and the accompanying adverbial form a semantic unit which cannot be analyzed into the meanings of its parts, as for example

(72) auf den Hund kommen — go to the dogs
ans Licht kommen — be found out
auf seine Kosten kommen — reimburse o.s.
zu Schaden kommen — be ruined
auf den Gedanken kommen — have the idea
ins Gerede kommen — be talked of
in die falsche Kehle kommen — go down the wrong way

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[5] Another characterization of stative verbs is that in English they do not occur in the continuous form (see G. Lakoff 1966, 1970). Since the expressions in question here also cannot occur in equivalent German constructions, this again confirms their stative nature. In

(1) Er kommt gerade nach Berlin.

kommen necessarily is a motion verb. (1) does not carry the connotation change of "state".

zu Vermögen kommen — come into money
zu Ohren kommen — be told
zur Sprache kommen — be discussed

and many others.

The final conclusion is that for *kommen* and *gehen* as motion verbs, deictic information in expressions containing *kommen* is only predictable if the expression does not contain an adverbial indicating the goal of a movement and deictic information in expressions containing *gehen* is only predictable if the expression does not contain an adverbial indicating the source of a movement. If such adverbials do occur, however, then in German, unlike in English, the deictic feature can be neutralized, but, German resembles English in that *kommen* still remains goal-oriented while *gehen* is either source-oriented or motion-oriented.

If *kommen* and *gehen* are used to express change of state in any of the senses discussed, then *kommen* is result-oriented and *gehen* cause- or change- oriented. Thus, on a very high level of abstraction, that is, considering change of state as a movement from one state to another, one may establish a basis of comparison for the contrastive function of *kommen* and *gehen* in these two areas of their use. That this generalization about German *kommen* and *gehen* does not correspond to the generalization about English *come* and *go* can be explained by the fact that even in figurative contexts the deictic feature of the English verbs is resistant while it is neutralized in German. Thus in English information about normal states and evaluative viewpoints is predictable due to the choice of either *come* or *go* in figurative contexts, just as deictic information about speaker's and addressee's location is predictable due to the occurrence of *come* or *go* in non-figurative contexts. In German *kommen* and *gehen* carry no information about normal states or evalative viewpoints; either *kommen* or *gehen* may be used to indicate change towards or away from normal states and towards pejoratively or amelioratively evaluated states. Where *kommen* and *gehen* both may occur in an otherwise identical figurative context, that is, in minimal pairs of sentences, they carry information about the cause of a change. If *gehen* occurs, the prediction is that the person involved in the change is also the cause or instigator of the change. If *kommen* occurs, no predictions can be made concerning the cause, except that the person involved has no influence on it, but the concentration is on the resulting state.

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A COMPARISON OF SENTENCE PATTERNS IN ENGLISH AND GERMAN

HOWARD JACKSON

City of Birmingham Polytechnic

This paper is an attempt, in the area of contrastive linguistics, to say something descriptively interesting about the structure of English and German, while at the same time providing some help for the language practitioner — the coursebook writer and translator, rather than the language teacher.

It is not a common feature of English grammars for them to contain a list of the basic sentence patterns in the language, at least not in any systematic fashion. Zandvoort's *Handbook of English grammar* (1972), for example, makes no attempt at such a list. The more recently written *Grammar of contemporary English* (Quirk et al 1972) does contain a list of the 7 basic clause types in English (p. 343), but one has to go to the chapter on verb complementation to fill this list out in any way. Similarly, C. C. Fries's *Structure of English* (1952) lists ten sentence formulas for English, without any expansion. And E. A. Nida in *A Synopsis of English syntax* (1960) makes a listing, but one which is very confused and unsystematic.

In the context of EFL, however, some attempt has been made towards listing the basic sentence patterns, notably by A. S. Hornby. He lists 25 'verb patterns', many with two or more variants, in his *Guide to patterns and usage in English* (1954), and this list has been carried through with revisions to the 3rd edition of the *Oxford advanced Learner's dictionary of current English* (1974). The main criticism of Hornby's list is the unsystematic nature of his analyses of sentences and of his use of grammatical terms; for example, the sentence "We congratulated him on his success" (Verb Pattern 14) is analysed as: Subject+vt (We congratulated), DO (him), prep (on), Noun phrase/clause (his success). This confuses functional terms like DO (=direct object) with categorial terms like Noun indiscriminately.

Turning to German grammars, here one frequently finds a list of the sentence patterns (Satzbaupläne). For example, the Duden grammar has such a list, containing some 23 'Hauptpläne' (1973:488). I have two main criticisms of the Duden list: 1. the element labelled 'Artergänzung' conflates two distinct sentence elements, on the one hand the manner adverb as in "Er verhält sich einwandfrei", and on the other hand the predicative adjective in an intensive relation with the subject (cf. Quirk et al 1972:346—7) as in "Diese Aenderung erscheint wünschenswert"; 2. more importantly, the Duden scheme ignores Nominal Clauses as sentence elements, i.e. dass-clause, w-clause, inf.-clause, e. g. "Er hat vorgeschlagen, ins Kino zu gehen". This follows the practice of a number of German linguists who have discussed sentence patterns — Erben, Engel, Heringer — who argue that nominal clauses should be treated as elements substituting for noun phrases. There are two arguments against this position: 1. terms like 'inf.-clause' and 'that-clause' are grammatically of the same kind as 'noun phrase', they are both categorial elements that may operate at a particular functional position, Subject or Object; 2. There are some verbs that take only a nominal clause as Object, and never a noun phrase, e.g. in English 'aim' in the sense 'intend' takes an inf.-clause, but not an NPo.

A German grammar which contains a fairly comprehensive list of sentence patterns is the Helbig/Buscha *Deutsche Grammatik. Ein Handbuch für den Ausländerunterricht* (Leipzig 1974). It lists 97 'satzmodelle', and it includes nominal clauses among the sentence elements recognised. Perhaps the criticism that could be made of it is that there is no differentiation between sentence patterns that are central and those that are marginal or of limited occurrence, e.g. Sn Adj Inf ("Der Mann hat gut reden").

What, then, are the sentence patterns of a language? They are the simple, non-passive, affirmative, declarative sentences, and they illustrate the range of combination of sentence elements that is possible in a language. The topic has most frequently been treated in the context of Dependency Grammar (and Valency Theory), which views the verb as the chief element in the sentence. The verb is then regarded as determining the number and nature of the other sentence elements, i.e. the elements that are dependent on the verb, as 'complements' — to 'complete' the grammar or the sense of a sentence. So, the sentence patterns represent the possible patterning of complements in a language.

The question about sentence patterns resolves itself into a question about verbal complements. Not all elements in a sentence may be complements — only those that are directly dependent on the verb. For example, in the sentence "Jim keeps the car in the garage", 'in the garage' is a complement, but in "Jim washes the car in the garage", it is not. 'In the garage' may be deleted from the second without affecting the grammatical completeness;

not so in the first one, where the deletion of 'in the garage' changes the meaning of 'keeps' and possibly renders the sentence only marginally acceptable. It would seem that complements are those elements which are obligatory, i.e. cannot be deleted without affecting the grammaticality or the fundamental sense of a sentence.

But consider the following sentence: "Jim sent Jane the parcel". The element 'Jane' may be deleted without prejudicing the grammaticality of the sentence, and yet one senses intuitively that the verb 'send' requires both an indirect object (recipient) and a direct object. This problem has led to attempts by linguists working in this framework to provide an operational test for distinguishing between optional elements (non-complements) and 'facultative' elements (complements that may be deleted). None of them is entirely satisfactory. They all manage to account for the main cases, but there is a number of difficult cases that seem to evade formal tests. I would like to suggest — tentatively — that the distinction between obligatory, facultative and optional elements is not an 'either/or' matter, but a 'more-or-less' matter. There is a scale from obligatory to optional, with clear-cut cases at either end, but there are some elements, which, some of the time, are more or less obligatory or more or less optional. This is evident, for example, in the pattern 'S V mit/with-NP', where it is often difficult to decide whether the 'mit/with-NP' element is a prepositional object (i.e. a complement) or an adverbial of some kind, maybe a complement, maybe not:

"Sie müssen mit einem nur kleinen Erfolg rechnen"	(prep-obj)
"Er fuhr mit seiner Erzählung fort"	(?prep-obj)
"Die Versammlung schloss mit einem Lied"	(adv. — ?comp)
"Er spricht mit Peter"	(?adv. — ?comp).

The lists of sentence patterns that I have composed (see Appendix), although they are not complete, contain, I believe, the main patterns of English and German. At first it may seem that I am guilty of mixing functional and categorial terms. In fact, only 'S' and 'V' are functional terms; and I have listed them as such because what I am really interested in are the non-subject complement elements. Each list divides into five groups on the basis of the functional terms: 1. Intensive sentences, English 1—4, German 1—4; 2. Intransitive sentences, English 5—11, German 5—13; 3. Mono-transitive sentences (one object), E12—31, G14—42; 4. Di-transitive sentences (two objects), E32—41, G43—60; Complex-transitive sentences (object + other element in intensive relation with it), E42—50, G61—70, (terms from Quirk et al 1972). And so the categorial elements are those which may fill these functional slots.

In comparing the sentence patterns of English and German, five main differences are apparent; the first three involve features that are present in

German but not in English, and the other two concern features present in English that are not in German.

1. Case in German. This is perhaps the most obvious difference. The most usual case for NPo in German is the accusative, but dative and genitive may also occur. Genitive is very rare, being replaced by prepositional constructions, but it still persists with a few reflexive verbs – pattern G22 – (e.g. 'sich bedienen', 'sich enthalten'), and in di-transitive constructions (G45), e.g. 'berauben', 'beschuldigen', 'bezichtigen'. The dative is more frequent as the case of NPo. And the ditransitive pattern 'S V dat NPacc (G44) is equivalent to the English 'S V NP NP' (E32) – and not the German pattern 'S V NPacc NPacc' (G43), which occurs with only two verbs ('lehren', 'kosten')'. There is another pattern in which two NPs occur in the accusative – G67 – but here the second NP is an intensive relation with the first, i.e. it refers to the same 'thing'. NPs in an intensive relation are in the same case, cf. G3, where both S and NPcurrent are in the nominative case. This means that intensive sentences are formally distinguishable from transitive sentences in German, whereas this not the case in English. Case marking also has the effect of increasing the number of sentence patterns in German.

2. Reflexives. I have used two symbols to indicate reflexive constructions in German: 'NP(S)' and 'sich'. 'NP(S)' refers to genuine semantic reflexives, where an agent performs an action on himself, which in most cases could have been performed on someone else, e.g. "Er wäscht sich", "Er betrügt sich", "Er bringt sich um". 'Sich' refers to other cases. English, for the most part, has only cases of 'NP(S)': verbs taking reflexive pronouns may nearly always take an NPo referring to a third person as well. There is a small number of exceptions, e.g. 'perjure oneself', 'pride oneself', 'avail oneself', which refer to actions that could not be performed on a third person but only on oneself.

The 'sich' cases in German may be of two general types. On the one hand there are the 'reflexive verbs', which just so happen to be formed with the reflexive pronoun. For the most part, they refer to actions of a 'personal' nature, e.g. 'sich ärgern,', 'sich schämen', 'sich freuen', 'sich kümmern'. The majority are verbs which take prepositional objects (G24), but a few are formed with 'NPacc', 'NPdat' 'NPgen' (G20–22). On the other hand, the reflexive construction (particularly G11) is used as a 'middle voice' construction in German. German, like English, also uses the 'S V' pattern as a middle voice, e.g. "Er brennt das Holz an – Das Holz brennt an", "He is burning the wood – The wood is burning". But more frequently, German uses the 'S V sich' pattern for the middle voice, e.g. "Man hat die Situation geändert – Die Situation hat sich geändert", "Man hat die Preise verdoppelt – Die Preise haben sich verdoppelt". Indeed, this seems to be the main function of the pattern G11; there are few intransitive reflexive verbs.

3. 'Da(r)-prep + Nominal Clause'. This refers to patterns G30, G32, G34, G36, etc. And it reflects the possibility in German of including the preposition of prepositional verbs/objects when the object is a nominal clause. This is a regular possibility with all nominal clause constructions in German, though 'da(r)-prep' is in some cases optional. In English the most common nominal clause contruction with a preposition is the 'prep-ing-clause' (E30), which is frequently the equivalent of German 'da(r)-prep zu-inf-cl.' (G38), e.g. "He insists on getting up early" — "Er besteht darauf, früh aufzustehen". In English a preposition may also occur with a 'wh-clause' (E26), and it may occur with anticipatory 'it' with a 'that-clause' (E24), though this has limited use and sounds forced in English. Otherwise, verbs with prepositional objects in English leave out the preposition when the object is a nominal clause, e.g. "He dreamed about his wedding" — "He dreamed about getting married" — "He dreamed that he got married".

4. English '-ing-clause'. There is no direct equivalent of this construction in German. In English it occurs in mono-transitive structures with and without preposition (E28—30), in di-transitive structures only with a preposition (E37), and in complex-transitive structures only without a preposition (E46). In many cases in English the mono-transitive use is interchangeable with a 'to-inf-clause', and it seems to be most frequently translated into German by a 'zu-inf-clause', e.g. "He has started learning German" — "He has started to learn German" — "Er hat angefangen, Deutsch zu lernen".

Here is probably the appropriate point to give some explanation of the difference between di-transitive and complex-transitive structures, since this also affects our fifth contrast. In di-transitive structures there are two object participants involved, both of which may be questioned:

e.g. "Jim asked him whether the train had left"
"Jim asked him to leave the room"
"Jim asked him about coming to lunch"
— "Who did Jim ask?"
— "What did Jim ask (him)?".

In complex-transitive structures only one object is involved, which has a complex structure, so that only one question parallel to those above is possible:

e.g. "Jim prefers us to call in the evening"
— "(+) Who does Jim prefer?"
What
— "+What does Jim prefer us?"
"Jim saw him cleaning the windows"
— "(+) Who did Jim see?"
What
— "+ What did Jim see him?"

And a set of slightly different cases:
"Jim forced him to come to lunch"

— "(+) Who did Jim force?"
?What
— "(+) What did Jim force him (to do)?"

"Jim caught him stealing the apples"

— "(+) Who did Jim catch?"
?What
— "(+) What did Jim catch him (doing)?"

In English, it appears that the 'NP -ing-clause' pattern is ditransitive if the '-ing-clause' is introduced by a preposition, but complex-transitive if not (E37, 46).

5. Complex-transitive patterns with non-finite nominal clauses (E44—6). Pattern E44 contains verbs of both the 'force' kind and the 'prefer' kind: the former have more affinity with di-transtiive structures, the latter with monotransitive. The 'force' kind of structures are derived in transformational grammar by means of the 'Equi-NP deletion' transformation, i.e. the NP ('him' in "Jim forced him to come for lunch") is considered to represent both the object in the matrix clause and the subject in the embedded clause: "Jim forced him (him to come for lunch)", (cf. Akmajian & Heny 1975: Ch. 9).

It seems that the situation is sowewhat different in German. Most of the verbs of the "force' kind I have included among the di-transitives, since both elements may be questioned:
e.g. 'warnen' — "Er warnte mich davor, mit diesem Mann zu sprechen" (G52)
— "Wen hat er gewarnt?"
— "Wovor hat er (mich) gewarnt?"
'zwingen' — "Er zwang mich dazu, mit ihm zu Mittag zu essen"
— "Wen hat er gezuwangen"?
— "Wozu hat er (mich) gezwungen?".

Both these verbs are, then, prepositional in German, which makes the boundaries between the constituents clear. They may be made prepositional in English: "He warned me against speaking to that man"
"He forced me into lunching with him"
and take '-ing-clauses'. In these cases it is difficult to know whether to include the 'force' group in English under the di-transitive or the complex-transitive patterns.

Verbs of the 'prefer' kind, however — 'prefer', 'want', 'like', 'love', 'hate'; 'vorziehen', 'wünschen', 'lieben', 'hassen' — do not occur in German with

infinitive clause complements having an implied subject different from the subject of the matrix clause: "Ich wünsche, ins Kino zu gehen"
"Ich wünsche, dass er ins Kino geht",
i.e. they are always mono-transitive.

We turn now to a comparison of the sentence patterns from the point of view of their verb membership, i.e. the group of verbs that is able to enter each pattern. In two equivalent sets of German and English verbs, there is a considerably larger set of verbs in German than in English: in my sample it was about 850 German verbs to 600 English. The main reason for this discrepancy seems to be the incidence of prefixed verbs in German: the same verb root may occur with an array of prefixes, and each one is treated as a separate verb. In many cases the verbal prefix in German is the equivalent of the particle in an English phrasal verb. And since I have not included phrasal verbs in English, the two sets of verbs are not completely equivalent. We will look at each of the five functional grupings in turn and draw a number of comparisons.

1. Intensive patterns. The verbs taking 'current' attributes in the two languages are roughly equivalent, including items like 'seem — scheinen', 'look — aussehen', 'smell — riechen', 'sound — klingen'. But the groups taking 'resulting' attributes are vastly different. German shows only one verb of this kind: 'werden', which does service for English 'become', 'grow' ("grow cold"), 'turn' ("turn pink"), 'get',("get warm"), 'go' ("go lumpy"). In addition to these five general verbs in this pattern, there is a significant number of verbs which seem to be restricted in the adjectives of result that may be associated with them, e.g. 'break — open', 'fold — flat', 'stretch — tight', 'wear — thin', 'wipe — clean'. In some ways these combinations are similar to the verb + particle combinations of phrasal verbs, where the particle often has a resultative meaning, cf. 'break out', 'wear out', 'wipe off'. These combinations seem to be frequently translated into German by means of prefixed verbs, e.g. "The box broke open — Die Kiste brach auf", "The clothes have worn thin — Die Kleider haben sich abgetragen".

Comparable to these last, there is a group of verbs in German which enters the pattern 'S V in-Stücke', which I have included in the sentence pattern 'S V in-NPacc' (G23). It is arguable that these should more appropriately belong in the 'S V Adj. result' pattern (G4). This group includes: 'bersten', 'explodieren', 'platzen', 'zerspringen'.

2. Intransitive patterns. The membership of the intransitive patterns is broadly similar, apart from three general differences that have already been mentioned: 1. the incidence in German of prefixed verbs greatly increases the

number of verbs, in this case particularly in pattern 'S V' (G5); 2. German has an extra set of patterns to account for the 'reflexive' cases, so that detailed comparison has to take the reflexive and nonreflexive patterns together; 3 the German 'S V (middle)' pattern (G6) has significantly fewer members than the equivalent English pattern (E6), because the 'S V sich' pattern (G11) is also a 'middle' pattern in German. A small number of verbs in German may form their middle voice in either G6 or G11, e.g. 'öffnen' — "Hans öffnete die Tür": "Die Tür öffnete"/"Die Tür öffnete sich"; 'enden' — "Hans endete seine Rede": "Die Rede endete"/"Die Rede endete sich".

3. Mono-transitive patterns. Again prefixed verbs inflate the number of German verbs in some patterns, particularly in the 'S V NPacc' pattern (G14). English does not have the 'S V NPdat' pattern; the corresponding verbs to those that enter this pattern in German enter either the 'S V NP' pattern (E12), e.g. 'dienen — serve', 'folgen — follow', 'gefallen — please', or the 'S V Prep-NP' pattern (E17), e.g. 'passieren — happen to', 'zuhören — listen to', 'zustimmen — agree to'.

A greater number of verbs in German enters the pattern 'S V Prep-NP' (G23, E17) than in English. Comparative figures are approximately 150 German verbs to 100 English verbs. There appear to be two main explanations of this disprepancy: 1. some verbs may take a prepositional object in German that take only a NP object in English, e.g. 'malen an — paint', 'zweifeln an — doubt'; 2. the 'S V NP' pattern may be more common for the English equivalent and/or the German verb may allow only a prepositional object, e.g. 'fortfahren in/mit — continue (in/with)', 'zusammentreffen mit — meet (up with)'.

Turning to the nominal clause patterns, the finite clause patterns (that-clause/dass-clause, wh-clause/w-clause) have a roughly similar membership, containing verbs of mental, emotional and communicative activity. In the non-finite clauses, however, there are some interesting differences. English is richer in non-finite clause patterns, as we have noticed, having '-ing-clauses' as well as infinitive clauses. And English seems to allow a slightly greater number of verbs in these patterns than does German, e.g. "Jim reported seeing sheep on the road" — "Er berichtete, dass er...", "He regretted saying those words" — "Er bedauerte, dass er...". The English pattern 'S V Prep-ing-clause' (E30) is frequently translated by German patterns G38 and G41 ('S V (sich) da (r)-prep zu-inf-clause'), e.g. "He complained about having to go to the dentist" — "Er klagte darüber, zum Zahnarzt gehen zu müssen", "He boasted about winning the race — "Er rühmte sich damit, das Rennen gewonnen zu haben".

4. Di-transitive patterns. The German pattern 'S V NPdat NPacc' (G44) is equivalent to English E32 and E38. Most of the verbs in these patterns are of the 'benefactive' type, i.e. they can be roughly paraphrased by 'give someone

something'. German, however, has a group of 'deprivative' verbs in this pattern, including 'rauben', 'verbergen', 'versagen', 'verweigern' (English has only 'refuse',) and a group of 'additive' verbs, including 'beifügen', 'beilegen', 'hinzufügen'.

The numbers of verbs in the 'S V NP Prep-NP' patterns (E33, G46) are similar, and both English and German have the problem here of deciding in many cases whether the prepositional phrase is object or adverbial. This is particularly problematic for the prepositions 'for/für', 'with/mit', 'to/zu'.

The general membership of the group of verbs in each language taking nominal clauses is very similar, and this applies to mono-transitive cases as well as di-transitive. Possibly there are some general kinds of meanings associated with nominal clauses which restrict their use to a particular set of verbs. The differences between the languages arise from the distribution of the verbs among the patterns.

German distinguishes a group of patterns characterised by the structure 'NPacc+nom. clause' and a group by 'NPdat+nom. clause'. English has a group of 'NP+nom. clause' patterns and a group of 'to-NP+nom. clause' patterns. English allows some verbs to enter both groups, e.g. 'promise, show him/to him that...'. The only verb in German that allows both 'NPacc' and 'NPdat' with a nominal clause is 'lehren', and that is possibly because it is in the process of changing from an NPacc to an NPdat verb. The majority of verbs entering the 'NPacc+nom. clause' patterns in German take prepositional objects, i.e. they enter patterns G48, G50 and G52.

The English pattern 'S V NP Prep-ing-clause' (E37) is translated either by an infinitive clause, e.g. "forgive him for making a noise – verzeihen ihm, einen Lärm gemacht zu haben", or by a 'dass-clause', e.g. "thank him for shutting the door – danken ihm dafür, dass er die Tür zumachte".

5. Complex-transitive patterns. We have already noticed that German shows a paucity of cases in this group with infinitive clauses. The remainder of the complex-transitive patterns comprises those with two NPs in an intensive relationship (Object+Object Complement). The second NP in German is sometimes introduced by a preposition ('als', 'für', 'zu'); English also has 'as', though it is often interchangeable with NP, e.g. "I regard him (as) a friend" – "Ich betrachte ihn als einen Freund".

The 'S V NP Adj. result' pattern in English (E48), like the 'S V Adj. result' pattern (E2), contains a number of verbs not contained in the equivalent German pattern (G64) that take a limited number of adjective complements similar in function to particles in phrasal verbs, e.g. 'hammer – flat', 'pack – full', 'push – open'. Again these seem to be translated into German mostly by prefixed verbs, e.g. 'vollpacken', 'aufstossen'.

It remains for me to give some indication of what application the contrastive information contained in the foregoing might have. I have been presenting two kinds of contrastive information: on the one hand I have been comparing the basic sentence patterns of the two languages; on the other I have been comparing individual verbs or groups of verbs. That is to say, there is some information that is relevant to syntax, and some that is relevant to the lexicon.

The syntactic information indicates what differences there are between German and English in the nature and range of sentence patterns, and in addition which sentence patterns are broadly equivalent between the two languages. The lexical information indicates differences in syntactic operation between equivalent lexical items (verbs) in the two languages, information that one might reasonably expect to find in a bilingual dictionary.

My contention is, therefore, that the kind of information that I have been discussing should have its place in the reference grammar and pedagogical grammar, and in the bilingual dictionary, which are the handbooks of the language practitioner.

APPENDIX

ENGLISH SENTENCE PATTERNS

1. S V Adj. current	He looks tired
2. S V Adj. result	The milk turned sour
3. S V NP. current	He seems an intelligent man
4. S V NP. result	She became a nurse
5. S V	Who's coughing?
6. S V (middle)	The door opened
7. S V Aplace	They live in Birmingham
8. S V Adirection	He rode into town
9. S V Amanner	These children behave badly
10. S V Aextent	The performance lasted three hours
11. It V...	It seems that no one knows about it
12. S V NP	He cut the wood
13. S V NP(S)	He's shaving himself
14. S V NP(Sreciprocal)	Have you met each other?
15. S V NPcognate	She lived a good life
16. S V NPresult	This firm produces nuts and bolts
17. S V Prep-NP	Children believe in fairies
18. S V NP Aplace	He keeps the matches in a drawer
19. S V NP Adirection	He put the car in the garage
20. S V NP Amanner	You mustn't treat your dog badly
21. S V NP Atime	She dated the letter 6th August
22. S V NP Aextent	The car cost me £ 800
23. S V that-clause	He demanded that you should visit him

24. S V Prep-it that-clause	You can depend on it that I'll be there
25. S V wh-clause	I wonder why he hasn't come
26. S V Prep-wh-clause	He doesn't bother about who comes
27. S V to-inf-clause	He wants to write a book
28. S V -ing-clause	They suggested going to the theatre
29. S V -ing-cl. (=passive inf.)	My shoes need mending
30. S V Prep-ing-clause	He believes in getting up early
31. It V NP...	It surprised me that he knew so much
32. S V NP NP	Could you lend me a pen?
33. S V NP Prep-NP	This episode robbed him of his position
34. S V NP that-clause	We told him that they had failed
35. S V NP wh-clause	She asked him whether he knew the song
36. S V NP to-inf-clause	I advised him to give her an apple
37. S V NP Prep-ing-clause	They accused her of stealing the money
38. S V NP to-NP	I gave the books to Jim
39. S V to-NP that-clause	He mentioned to us that it was over
40. S V to-NP wh-clause	She confessed to us why she had gone
41. S V Prep-NP Prep-NP	She complained to us about his conduct
42. S V NP inf-clause	They watched us cross the road
43. S V NP inf-cl. result	We made them eat it up
44. S V NP to-inf-clause	They intend us to wait a long time
45. S V Prep-NP to-inf-clause	They rely on us to tell him
46. S V NP -ing-clause	They discovered her playing the flute
47. S V NP Adj. current	I find him amusing
48. S V NP Adj. result	He painted the door blue
49. S V NP NPcurrent	I consider him an honest man
50. S V NP NPresult	They elected Jim chairman

GERMAN SENTENCE PATTERNS

1. S V Adj. current	Er sieht krank aus
2. S V Adj. result	Die Kleider wurden schmutzig
3. S V NP. current	Sie bleibt Schullehrerin
4. S V NP. result	Er wurde Ingenieur
5. S V	Er ging weg
6. S V (middle)	Das Holz brennt an
7. S V Aplace	Er wohnt bei seinem Onkel
8. S V Adirection	Sie fiel ins Wasser
9. S V Amanner	Er handelte vorsichtig
10. S V Aextent	Das Kind misst 75 cm.
11. S V sich	Der Unfall hat sich wiederholt
12. S V sich Adv	Sie traute sich nicht ins Wasser
13. Es V...	Es donnerte
14. S V NPacc	Sie faltete das Tuch
15. S V NP(S)	Sie legte sich hin
16. S V NP(Sreciprocal)	Wir haben uns kennengelernt
17. S V NPcognate	Er schlief einen gesunden Schlaf
18. S V NPresult	Er hat ein Schloss gebaut
19. S V NPdat	Das gehört deiner Mutter
20. S V sich NPacc	Wir können uns ein neues Auto leisten

21. S V sich NPdat	Er hat sich uns gesellt
22. S V sich NPgen	Er hat sich des Urteils enhalten
23. S V Prep-NP	Wir warten auf einen Brief
24. S V sich Prep-NP	Er befasst sich mit dem Problem
25. S V NP Aplace	Wir liessen ihn in Rom
26. S V NP Adirection	Sie stellte die Tasse auf den Tisch
27. S V NP Amanner	Er hat sie gut behandelt
28. S V NP Aextent	Ich schulde ihm 20 Pf.
29. S V dass-clause	Ich erwarte, dass nichts passiert
30. S V da(r)-prep dass-clause	Er hat davon gesprochen, dass...
31. S V sich dass-clause	Wir bilden uns ein, dass alles schief geht
32. S V sich da(r)-prep dass-cl.	Wir ärgern uns darüber, dass...
33. S V w-clause	Ich fragte, ob er kommen konnte
34. S V da(r)-prep w-clause	Er denkt darüber nach, wie...
35. S V sich w-clause	Sie erkundigten sich, ob der Zug fährt
36. S V sich da(r)-prep w-clause	Sie streiten sich darüber, ob...
37. S V zu-inf-clause	Sie wünscht ihren Bruder zu sprechen
38. S V da(r)-prep zu-inf-cl.	Er besteht darauf, morgen frei zu bekommen
39. S V es zu-inf-cl	Ich ertrage es nicht, ins Kino zu gehen
40. S V sich zu-inf cl	Er weigerte sich, etwas zu sagen
41. S V sich da(r)-prep zu-inf-cl	Er eignet sich nicht dazu,...
42. Es V NP...	Es schmerzt mich, dass er gestorben ist
43. S V NPacc NPacc	Sie lehrte uns ein neues Lied
44. S V NPdat NPacc	Sie hat mir einen Brief geschrieben
45. S V NPacc NPgen	Man beschuldigte ihn des Diebstahls
46. S V NPacc Prep-NP	Er fragte mich nach meinem Namen
47. S V NPacc dass-clause	Sie lehrte uns, dass das Fluchen böse sei
48. S V NPacc da(r)-prep dass-cl.	Er bedrohte das Volk damit, dass...
49. S V NPacc w-clause	Wir fragten ihn, ob der Zug ankommt
50. S V NPacc da(r)-prep w-cl.	Er hat mich davon informiert, wer...
51. S V NPacc zu-inf-clause	Ich wies ihn an, morgen zu mir zu kommen
52. S V NPacc da(r)-prep zu-inf-cl	Ich warne dich davor,...
53. S V NPdat Prep-NP	Wir danken Ihnen für den Brief
54. S V NPdat dass-clause	Sie antwortete ihm, dass sie nicht käme
55. S V NPdat da(r)-prep dass-cl	Ich danke Ihnen dafür, dass...
56. S V NPdat w-clause	Er machte mir klar, wie der Motor startet
57. S V NPdat da(r)-prep w-cl.	Er erzählte mir davon, wie...
58. S V NPdat zu-inf-clause	Ich empfehle dir, den Film zu sehen
59. S V NPdat da(r)-prep zu-inf-cl	Ich helfe Ihnen damit,...
60. S V Prep-NP Prep-NP	Ich sprach mit ihm über das Wetter
61. S V NP inf-clause	Er liess den Gast eintreten
63. S V NP Adj. current	Ich finde sie schön
64. S V NP Adj. result	Sie machte das Zimmer sauber
65. S V NP für-Adj	Ich halte ihn für intelligent
66. S V NP als-Adj	Er betrachtet sie als schön
67. S V NP NP. current	Sie nannte ihn einen Dummkopf
68. S V NP für-NP	Ich halte ihn für einen Ehrenmann
69. S V NP zu-NP	Man machte ihn zum König
70. S V NP als-NP	Sie betrachtet ihn als ihren Freund

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SYNTAX IN CONTRAST*

Hubert Haider

University of Vienna

I. A theory of grammar that aims for explanatory adequacy — as for instance EST — has to prove its value for contrastive linguistics as well. The basic tenet of EST is the investigation of the universal principles of human language (Universal Grammar). Marking the limits between universal and specific matters yields results of immediate relevance for contrastive analysis. Three points will be discussed:

— differences in the derivation: base-generated vs. derived (III)
— interaction between syntax and lexical properties (IV)
— the parametrical form of constraints on rule application (VI)

II. The ordinary working syntactician of the EST-type seems at first sight to pay little attention to the needs of contrastive analysis. The effort to find deeper and more revealing explanations appears to be concentrated on the study of a single language. Chomsky nevertheless claims that analysing a single language will lead to the discovery of many universal properties of human languages. The solution of this apparent contradiction works roughly in the following way:

> Suppose we find a particular language having the property P. Suppose, furthermore that P is sufficiently abstract and evidence bearing on it is sufficiently sparse and contrived so that it is implausible to suppose that all speakers might have constructed grammars satisfying P by induction (or training). Then it is plausible to postulate that P is a property of the language faculty.
>
> Note that we may plausibly postulate that P is a property of universal grammar on the basis of investigation of a single language. The argument rests on the alleged fact that something is known without relevant experience so that knowledge must be attributed to the language faculty itself, a faculty common to the species. (Chomsky 1977a : 65)

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It is the task of linguistic theory to discover the general structure of the language, faculty, referred to as Universal Grammar (UG) by Chomsky.

> Investigations of a variety of languages offers a *corrective* (italics/mine). But it must be kept in mind that superficial study of language is rarely informative and becomes less so as linguistic theory begins to achieve a degree of deductive structure and abstractness. Furthermore, linguistic principles of any real significance generally deal with properties of rule systems, not observed phenomena, and can thus be confirmed and refuted only indirectly through the construction of grammars, a task that goes well beyond even substantial accumulation and organization of observations. (Chomsky forthcoming: 2)

Chomsky assumes that UG provides a highly restricted system of "core grammar" which represents the 'unmarked' case:
Core Grammar:

1) Base (Version of X-theory and the lexicon)
2) Transformations

3a) Deletion	3b) Construal
4a) Filters	4b) Interpretive Rules
5a) Phonology and stylistics	5b) Conditions on Binding

1) and 2) constitute the syntax of the core grammar. Transformations are restricted to a single rule: *Move α*. where α is a category.

3a) to 5a) associate phonetic interpretation to surface structure, 3b) to 5b) associate representations in 'logical form' to surface structures. For a detailed discussion see: Chomsky 1975, 1977a, b; Fiengo 1974.

I shall concentrate on the implications of the components of syntax and logical form for contrastive analysis. The whole enterprise has been haunted by the problem of determining the "tertium comparationis". Among others, the following possibilities have been investigated into:

(1) Comparing *translational equivalent* (=representing the same proposition-structures:
This method suffers from the insensibility of grammars to filter out the syntactic triggers for semantic differences. It is by no means certain that semantic similarity warrants the conclusion of a similar underlying syntactic structure for any pair of sentences. This will be no surprise if we adopt the *autonomy hypothesis* for syntax.
A good though crude example are idioms. The propositional content of *tease* and *pull someone's leg*, for instance, is the same. The syntactic behavior of e.g. 'X teases Y' and 'X pulls Y's leg' is quite independent.

(2) Comparing *structural system* and *patterns:*
The disadvantage of that method lies in the explanatory inadequacy of the systems used for modelling grammars. As a consequence of the static view

processes of interaction between different systems cannot be captured in a straightforward manner.

(3) There have been attempts to use TG, comparing deep structures or the relation between deep structures and surface structures (cf. Krzeszowski 1971).

The success of the enterprise depended on the relevance of DSs with respect to the differences between languages and on the possibility of isolating the relevant aspects. Since DSs are not directly observable they have to be constructed in accordance with the transformational rules that map them on SSs, and since many of the rules seemed to be highly language specific the exact contribution of DSs for shaping SSs could not be decided generally. Finally, since it turned out that semantic interpretation had better take SSs as input, the prominent role of DS diminished. The problems indicated were connected with an 'Aspects'-Type of transformational generative grammar. Since then the restructuring and refinement of the theoretical tools — especially the success in developing a highly constrained[1] notion of transformation: Move α — lead to the possibility of isolating a few parameters of syntax, slight changes of which will lead to complex effects on generated structures. I shall mainly dwell on two of them: 1) Base-generated vs. derived; 2) Subjacency.

What we suggest is to contrast languages as to how their specific properties differ from UG, instead of investigating into differences with regard to special grammatical constructs, as for instance DSs or certain rules.

III. As for transformational rules, Emonds (1976) proposed that all such rules fall into a few restricted types. Among them are the cyclic rules, which are structure-preserving, i.e. the structure of the output is a structure isomorphic to base-generated structures. Bresnan (1976) has suggested that all structure-preserving transformations[2] should be replaced by lexical rules.

Without dealing with her arguments I want to exploit Wasow's (1977) suggestions in connection with the analysis of passives for contrastive analysis.

He offers distinguishing criteria for a decision whether a structure is derived or base-generated and has therefore to be accounted for by means of lexical rules. His conclusion is that there are *two sources* for passive structures in English, one transformationally derived and the other base-generated. He proposes the following criteria: Wasow (1977 : 331)

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[1] Constraints on transformations do not necessarily imply a more constrained theory of grammar since there is a trade-off relation between the components of a granmar A *normal form of a transformation*, however, is necessary for keeping track of the counterbalance.

[2] As a matter of fact Bresnan (1976) equates 'structure-preserving' with 'function-dependent', which does not hold. Cp. e.g. example (8).

(4)

	Lexical Rules	*Transformations*
1.	do not affect structure	need no be structure-preserving (cp. root-transformations)
2.	may relate items of different grammatica categories	do not change node labels
3.	"local"; involve only NPs bearing grammatical relations to items in question	need not be "local"; formulated in terms of structural properties of phrase markers
4.	apply before any transformations	may be fed by transformations
5.	have idiosyncratic exceptions	have few or no true exceptions

These properties of lexical rules are direct consequences of the organization of the theory. Criterion 3. deserves some comment. It is intended to cover the fact that the only information available for LRs is the information provided by the lexical entry. For our purpose that includes subcategorization frames, especially with regard to the complements of verbs, information about the case governed by the verb, and selectional features.
This property is opposed to the 'blindness' of transformations to relational properties and to the fact that transformations take whole phrase markers as input.
In the main line of the argument Wasow tries to show that some participles behave like base-inserted adjectives while others do not. I shall present a selective survey of the evidence:

Passive-participles as adjectives

(5) Occurrence in prenominal position

$$\begin{array}{l} \text{A} \\ \text{The} \end{array} \left\{ \begin{array}{l} \text{broken} \\ \text{filled} \\ \text{painted} \\ \text{cherished} \end{array} \right\} \text{ box sat on the table (Wasow (38))}$$

(6) Complement position of verbs requiring adjectival complements

$$\text{John} \left\{ \begin{array}{l} \text{acted} \\ \text{became} \\ \text{looked} \\ \text{sounded} \end{array} \right\} \left\{ \begin{array}{l} \text{happy} \\ \text{elated} \\ \text{annoyed at us} \\ \text{convinced to run} \end{array} \right\} \quad \text{(Wasow (39))}$$

(7) 'un-' prefixed participles

Our producs are untouched by human hands
*Human hands untouch our products (Wasow 40a, 41a)

For an extensive discussion of the nonderivability of 'un-'passives consult Hust (1977).

Derived passive-participles

(8) Double object constructions
a) The United Fund was given *($ 10)
$ 10 was given (to the United Fund)

It would be very difficult to specify the subcategorization features for 'given' analyzed as adjective.

b) John is believed to be a fool.

Structures like this are convincing evidence for a transformational analysis since there is no relational dependency between the derived subject and the verb.

(9) Passive of idiom chunks
a) *Headway has been made towards the solution of the problem.*
b) *Efforts have been made towards the solution of the problem.*
c) *Efforts have been indispensable for …*
d) *Headway has been indisoensable for ….[3]

The ungrammaticality of d) can be explained if we assume that 'headway' is strictly subcategorized for the object of 'make'. 'headway' is therefore not expected in subject position unless it is a derived subject.

If we agree with Wasow that there are two sources of passive we are prepared to search for differences in syntatic behavior, since base-generated structures are constrained by criteria 4.3 (locality) and 4.4 (not fed by transformations).

The predicted properties follow:

(10) a) *John $\left\{\begin{array}{l}\textit{looks}\\ \textit{acts}\\ \textit{seems}\end{array}\right\}$ *given first prize every time we have a contest told the bad news* (*Wasow* (54))

b) *Advantage* $\left\{\begin{array}{l}\textit{*sounds}\\ \textit{is}\end{array}\right\}$ *easily taken of John*

A comparison with German reveals similar properties. There are (at least) two passive constructions, referred to as 'Vorgangspassiv' (passive of action: PA) and 'Zustandspassiv' (passive of condition: PC):

(11) a) *Die Gäste werden begrüsst.* : Vorgangspassiv (PA)
(*=The guests are welcomed*)
b) *Die Gaste sind begrüsst,* : Zustandspassiv (PC)
das Fest kann beginnen
(*=The guests have been welcomed*
the party may begin)

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[3] Idiomatic NPs as head nouns of relative clauses do not invalidate the claim. e.g. The headway they made was incredible; In any analysis, raising or deletion, the generalization is captured: 'headway' has to be bound to a trace (by movement or interpretation) which occupies the object position of 'make'.

The morphological similarity between ordinary predicate constructions like (12)

(12) *Die Birnen sind reif* (=*The pears are ripe*)

and PC with respect to the copula is no reliable evidence for base-generation since the same regularity holds for PA:
There exist structures like (13)

(13) *Die Birnen werden* (*heuer sehr langsam*) [*reif*]$_{ADJ}$?[4]
[=(*This year*) *the pears are ripening* (*slowly*)]

Nevertheless, this is what we expect to find if we analyze passive in the way proposed by Chomsky (1977a):

(14) $[_{NP}e]$ *be* $[_{AP}$ *en* $[VP]]$ (*by NP*)

(14) is mapped on the surface structure by an instance of the application of 'move NP' (The terminal symbol *e* results from the nonapplication of a rule expanding some category).
Since German shows two different copula constructions we expect to find two different passive constructions.
Application of Wasow's tests yield the following results for German: Compare (15)—(19) with their respective counterparts (5)—(9):

(15) *die verrissene Aufführung* (=*the performance, pulled to pieces*)
Die Aufführung ist verrissen (*the performance is pulled to pieces*)
(16) *Avram wirkt schüchtern* / *eingeschüchtert.*
(*Avram gives the impression of being shy* / *intimidated*)
(17) *Die Chance ist* (*noch*) *ungenützt.*
(*The opportunity has not been taken advantage of*)
**Die Chance wird ungenützt.*
(18) *Sie nannten ihn einen Dichter* (*They called him a poet*)
Er wird ein Dichter genannt. (*He is called a Poet*)
**Er ist ein Dichter genannt.* (*He is called a poet*)
(19) *Die Leviten werden den Linguisten gelesen.*
(*The linguists are being reproached*)
**Die Leviten sind* $\left\{\begin{array}{l}\textit{den Linguisten gelesen}\\ \textit{erstaunlich}\end{array}\right\}$

As we see, the distinction between PA and PC correlates to the distributional difference between base-generated adjectives and derived participles.
There is additional evidence that PA and PC are syntactically unrelated:

(20) Coordination (*Sinha 1973*)
a) **The pilots are stationed in Thailand and satisfactory*

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[4] Note that there is an ambiguity. *Hans wird langsam gelehrt.* a) *John is taught slowly.* b) *John slowly becomes a scholar.*

b) _Die Tür war geöffnet und unbemalt._
(_The door was open and unpainted_)
c) _*Die Tür wird geöffnet und unbemalt_

Suppose we derived PC from PA by means of 'to be'-deletion.

(21) a) _Die Tür ist geöffnet worden._
⇒ _Die Tür ist geöffnet ø_

Even though as it seems the rule could be designed to filter out the 'passive-be' there are immediate problems. The analysis would fail since there are structures of each type without corresponding counterparts.

(22) _Die Brücke ist gestern gesprengt worden._
(_The bridge has been blown up yesterday_)

*Die Brücke ist gestern gesprengt ø

The derivation of (22) would have to be blocked. On the other hand there is no structure where (23) could be derived from:

(23) _*Das Fenster ist seit gestern geöffnet worden._ (_Helbig: 144_)
(_The window has been opened since yesterday_)
Das Fenster ist seit gestern geöffnet ø

No conclusive evidence can be drawn from participles in prenominal position for German (cp. Helbig: 144).

(24)	_der gesuchte Bleistift_	(_the pencil that is searched for_)
	die aufgewendete Zeit	(_the time spent_)
	die ausgeübte Funktion	(_the practiced position_)
	das gelesene Buch	(_the book read_)

In many cases the predicative use is ungrammatical. The semantic conditions[5] responsible for the peculiar behavior are paralleled by 'bleiben' (remain)-constructions.

(25) _*NP sein_ [$_{ADJ}$?_participle_]
e.g. *Der Bleistift ist gesucht.
*Der Bleistift bleibt gesucht

However, we recognize that the semantic modification accomplished by prefixing 'un-' is sufficient to make these sentences acceptable.

(26) _Die Funktion blieb unausgeübt._
Das Buch blieb ungelesen.

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[5] Cf. Helbig (1969 : 144). There is a class of durative-imperfective verbs which, although a participle exists, cannot be attributed a mutative-perfective 'Aktionsart' to, necessary for property interpretation in PC. E.g. ausüben, bitten, fragen, hindern, ...

Phenomena like cited above must be kept in mind when we deal with passives. They show that data are not a priori labelled for syntactic or semantic explanations. For a detailed investigation into semantic constraints on passive see Bolinger (1975).

In essence there seems to be the following situation:

Passive, syntactically a copula structure, has two sources, both in English and German. In German the difference is reflected morphologically. The morpho-syntactic difference goes parallel with a semantic one:

'werden'	indicates an action; or more precisely, an action being the acquisition of a property
'sein'	indicates a property (commonly expressed by adjectives)

The occasionally noted relation between **PA** and **PC**, namely action vs. result, seems to be attributable to the semantics of the copula. When we consider (27) it is natural to conjecture that each interpretation is associated with one of the derivations (cp. Wasow 1977: 350)

(27) *The door is closed* {*Die Tür ist geschlossen.*
Die Tür wird geschlossen.}
a) *The door is not open.*
b) *Someone or something closes the door.*

The result for contrastive analysis seems to be trivial: There is a lexical difference as to which participles are specified as adjectives proper by a lexical redundancy rule.

Fortunately this does not amount to the triviality of Joos' dictum of the unpredictable variability of language, since the lexicon is not any longer viewed as a depository for otherwise unaccountable phenomena. There are two different and clearly distinguishable types of copula constructions one of which is accounted for by a movement rule, the other by a lexical redundancy rule.

IV. A similar source for contrasts — being connected with the Lexicon — is the *property of control* associated with verbs.

(28) a) *I believed Bill to have left*
b) *I persuaded Bill to leave*
c) *I promised Bill to leave*

The underlying structure is according to Chomsky (details omitted):

(29) a) *I believed* [*Bill to have left*] : *no control*
b) *I persuaded Bill* [[*e*] *to leave*] : *object control*
c) *I promised Bill* [[*e*] *to leave*] : *subject control* +[*SC*]

In the unmarked case control is governed by the Principle of Minimal Distance (in terms of c-command). Certain verbs are marked in the lexicon +[*SC*] indicating that they exceptionally require subject control. (cp. Chomsky forthc.: 43)

There are further properties of embedded clauses that have to be accounted for — the so-called island phenomena (cp. Ross 1967, Chomsky 1973). Two familiar examples:

Tensed-S-Condition (*Chomsky 1977a : 90*)

(30) *The candidates hated each other*
The candidates expected [each other to win]
**The candidates expected [that each other would win]*

Specified Subject Condition

(31) *a*) **Tom' seems to us [t_1 to like each other]*
b) *Tom appealed to us to like each other*
c) **It seems to us that Bill likes each other*

Chomsky notes that there is a redundancy, (28) c) being blocked both by TSC and SSC. He reformulates the conditions in a way that interesting consequences for contrastive analysis result.

(32) Assumption:
The subject of a tensed clause is assigned nominative case (Chomsky forthc.: 17)

(33) A nominative anaphor cannot be free in $\bar{S}$ (ibid.: 48)
(34) If α is in the domain of the subject of β, β minimal, then α cannot be free in β.

'each other' being a nominative anaphor in (30) cannot be free in $\bar{S}$ according to (33). Therefore it cannot be bound to the NP of the matrix-S.

(31) a) 'each other' is in the domain of the subject of $\bar{S}$, thus according to (34) not free and cannot be bound to the object NP of the matrix-S.
(31) b) Underlying structure: ... to us [[*e*] *to like each other*] 'appeal' is unmarked, therefore *us* will control $[e]_{NP}$, which is a suitable antecedent for each other".

The familiar constraints follow from the reformulation. What remains to be accounted for is the fact that in structures of 'obligatory control' (cp. Chomsky/Lasnik) the embedded NP of

(35) has to be [*e*], i.e. not lexically filled.
(35) ...... [$_{\bar{S}}$wh-phrase [$_S$ *NP to VP*]] (Chomsky forthc.: 24)

Leaving out Chomskys lines of argumentation I summarize his solution. He notes that there has to be a filter.

(36) **N*, *where N has no case (Chomsky forthc.: 33)*

Case assignment, then, follows the general principles (37).

(37) a) NP is oblique when governed by P and certain marked verbs
b) NP is objective when governed by V
c) NP is nominative when governed by *TENSE* (Chomsky fc.: 33)
(38) α is *governed* by β if α is c-commanded by β and no major category boundary appears between α and β.

> Note that these conventions permit an NP subject to be nominative while its trace is governet by V, but they do not permit an NP subject to be nominative or objective (i.e. nonoblique) while its trace is governed by P. If we interplet conflict of case assignment rules as assigning*, it then follows that can be no preposition stranding under NP-movement, though there can be under wh-movement. This holds if we assume that oblique case is assgined in the base. (Chomsky forthc.: 35)[*]

Case assignment is taken to be clause bound in the unmarked case. Certain verbs are assigned a marked feature, call it F, which permits case to be assigned across clause boundary. An example is 'believe'. (cp. Chomsky forthc.: 38)

(39) I believe him to be a fool

The corresponding verbs in German and French are control verbs.

(40) * *Ich glaube Wiltrud diesen Mann gesehen zu haben.*
(*I believe Wiltrud to have seen that man*)
**Je crois Ulli avoir vu cet homme*

Consider now the context of obligatory control (41).

(41) *.... V ...* $[_{\bar{S}}$ *comp ...* $[_{NP}\, e]$ *...] where V is* $[-F]$ *and V and S c-command one another*

The rule of control for the context (41) can be given as (42)

(42) i) if comp $\neq$ null and V has no controller, then $[_{NP}\, e]$ is assigned ARB (=arbitrary)
ii) $[_{NP} e]$ is assigned the index of the nearest controller (i and ii apply in the order given)
A controller c-commanded by S of (42) is 'nearer' to $[_{NP} e]$ than one not c-commanded. (Chomsky forthc.: 43)

Thus case-assignment as well as control properties seem to be parameters useful for contrastive analysis as can easily be verified by a comparison of English and German passives.

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[*] Postulation of two levels for case-assignment seems to be an unelegant way of handling the facts. That is of course not so much an invalidating argument than a hint to consider alternative ways as well. Case assignment at SS only would have to meet the condition that for some structures case is governed by the trace which the NP is bound to.

V. Suppose the underlying structure for passive is (43).

(43) $[_{NP}e]$ *copula* $[_{AP} \ldots VP]$ *(by NP)*

German differs from English in the following respect:
German morphologically differentiates two types of NP complements — indirect object (dative) and direct object (accusative). As it is sometimes noted there is no major semantic difference between the various types of passive (PA).

(44) *a*)	*He was expected*	*ER wurde erwartet*	(*nominative*)
b)	*He was helped*	*IHM wurde geholfen*	(*dative*)
c)	*He was remembered*	*SEINER wurde gedacht*	(*genetive*)
d)	*He was waited for*	*AUF IHN wurde gewartet*	(*prepositional*)
			(*Helbig 1969 : 134*)

Yet sentences (44) cannot be accounted by the same mechanism. (44) a) is parallel to the English passive but not b)—d). They have to be derived by means other than object-preposing. Let us consider b) in detail. The dative-NP cannot be fronted to the subject position. Since it is assumed that dative is assigned in DS it is carried along in the course of NP movement. First of all there will be a case conflict when the dative NP is moved to the position of the subject and should be assigned nominative case. Further evidence is furnished by subject-interpretation (previously called EQUI, now a case of control):

(45) *a*) *Der Butler versuchte* [[*e*] *dabei unterstüzt zu werden*]
(*The butler tried to get supported*)
b) **Der Butler versuchte* [[*e*] *Dat. dabei geholfen zu werden*]
(*Reis 1976 : 65*)

The ungrammaticality of b) follows if dative is incompatible with the subject position.
Note also that there is no subject-verb agreement:

(46) *a*) *Den Kindern wurde geholfen.*
b) *Den Kindern wurde der Kuchen gegeben.*
(*The children were given the cake*)

Sentence b) is derived from (47) by topicalization, a very frequent and regular process in German.

(47) *Der Kuchen wurde den Kindern gegeben.*

It would therefore be natural to suppose that (46) a) is derived by the same mechanism.
There remains a problem to be solved: We took (43) to be the underlying structure of passive. (46) a) would then be derived on the following manner:

(48) [$_{NP}$e] *werd-*[$_{AP}$ *den Kindern geholfen*]
⇒*Topicalization*
Den Kindern [$_{NP}$e] *werd-geholfen.*

There is an unbound trace left and the sentence should be ungrammatical. A provision to be made suggests itself immediately.

(49) *Es wurde den Kindern geholfen.*

We might guess that [$_{NP}$e] is replaced by 'es'. Before we can accept this solution we must show how the following sentence is ruled out:

(50) **Es wurde dem Gast den Hut*$_{AC}$. *gestohlen.*
(*The hat of the guest has been stolen*)

This sentence is derived by non-application of move-NP (since it is optional) and insertion of 'es'.

The problem, in other words, is that object-preposing in passive of transitive verbs has to be made obligatory or provisions with a similar effect have to be made.

There exists a similar problem in English which has to be accounted for if we analyze passive in the proposed way. As it is poccible to expand a node by inserting lexical material or to leave it unexpanded it is also possible to expand all nodes leaving no node open for NP-movement.

(51) *Alexander PAST* [*be en*] *conquer Egypt by Plato*
⇒
**Alexander was conquered Egypt by Plato*

There seems to be involved a process of *property interpretation* (for a detailed discussion see Fiengo 1974) for copula constructions which rules out 'be conquered Egypt by Plato' as a grammatically possible property attributable to 'Alexander'. Essentially this is a problem related to word formation. Passives are analyzed parallel to copula structures with ordinary adjectives the difference being that AP dominates a VP node in passives. We have to specify conditions under which a participle may be interpreted as an adjective.

Since adjectives generally determine properties which are attributed to a term, roughly speaking, it should be possible to find syntactic reflexes of that behavior in connection with participles. Fiengo proposes principle (52) for property interpretation:

(52) *in the structure … NP …* $_{\alpha}$[… *t* …] … ,
where NP binds t, α is interpreted as specifying a property of the intended referent of NP

The immediate consequence of (52) is that the copula cannot be interpreted unless α specifies a property, which gives an explanation for the ungrammaticality of sentences with an NP other than *trace* in the object position of a transitive verb.

This apparently ad hoc condition will become more plausible if it can be shown that there is a close connection between passive and the attributive structure of adjectives. In fact there is a connection and it results from the base-structure, underlying passive: a copula structure parallel to predicative adjectives. The constraint is a consequence of the structure of AP, which does not allow a direct object.

Obviously sentence (50) is ruled out by principle (52).

We note that there are no adjectives in German[7] requiring a direct object although there are a lot of adjectives which require dative or genetive or prepositional complements.

(53) *der Toten eingedenk sein*	(*genetive*)
der Frau treu sein	(*dative*)
von der Aufführung begeistert sein	

This seems to be a syntactic counterpart to the proposed LRR for base-generated passive.

$$(54)\quad \begin{bmatrix} /x/ \\ +V \\ +[NP-NP]_2 \\ \quad w \end{bmatrix} \longleftrightarrow \begin{bmatrix} /x/ \text{ past participle} \\ +Adj \\ +[NP_2\ be-(by\ NP)] \\ \quad w \end{bmatrix}$$

One problem is still left open, the status of "es".

An analysis of 'es' deleting trace would be parallel to the analysis of 'there'-insertion proposed by Milsark (1974).

Unfortunately the parallel does not hold in relevant aspects. 'there' behaves like a real subject syntactically which 'es' does not.

(55) *Wird es den Freunden geholfen?
Will there be a revolution? (cp. also Breckenridge 1975)

Since topicalized phrases and 'es' are in complementary distribution this might suggest that 'es' is inserted in the topic position with the following structure for German sentences:

$$(56)\quad \begin{array}{l} \bar{\bar{S}} \rightarrow \text{topic } \bar{S} \\ \bar{S} \dashrightarrow \text{Comp [NP TENSE VP]} \end{array}$$

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[7] There are two exceptions: *Ich bin das Mädchen los* (*I got rid of the girl*); *Ich bin die Arbeit gewohnt* (*I am accustomed to work*). This accusative is referred to as 'Accusative by Error' in traditional grammar. Originally a genetive, it has been preserved in several idioms.

One difference between English and German passive would have to be accounted for by a modification of the rule of binding. We could imagine the following condition:

(57) If *topic* ≠ null, then [$_{NP}e$] is deleted

There is another less ad hoc possibility which could be entertained. If we follow the minimal distance principle the precedence-command property of bound anaphora could be saved in another respect, if we realize that anaphora is checked at the level of logical form, the input being SSS, then we could interpret the topicalized dative-NP as a possible controller of [$_{NP}e$] which would permit us to attribute semantically a property to the intended referent of the dative-NP. This would not be and undesirable result since it accounts for the semantic correspondence between (58) a) and b).

(58) a) Den Kindern wird geholfen
(The children are helped)
b) Die Kinder werden unterstützt.
(The children are supported)

Yet, this is no promising avenue since the semantic properties are the same even if an adverb is topicalized and the indirect object is not moved.
In all cases—whether there is an 'es' or a topicalized phrase in the topic—there is still the possibility of assigning arbitrary reference to [$_{NP}e$], which would be a syntactic account for the fact that quite a few transitive verbs seem to be used in passive as if they were intransitive.

(59) Es wurde mit Begeisterung eingekauft
(Shopping was done with enthusiasm)

We propose to replace (57) by (60).

(60) If comp null and [$_{NP}e$] is not in the domain of V, then
[$_{NP}e$] is assigned ARB. (arbitrary reference)

As for passive of intransitive verbs the solution seems to be semantically equivalent to an analysis in terms of subjectless sentences.

VI. The applicability of the transformational rules of 'core grammar' is supposed to be constrained by subjacency. Let us suppose that syntactic rules of core grammar are identical for a wide range of languages. Let us suppose furthermore that the principles constraining the rules are identical. What causes the contrast then in the syntactic structures of the respective languages are the *different parameters* of the constraint. As an illustrative example we shall consider the subjacency constraint. I shall rephrase it in terms suitable for discussion.

(61) No rule may move an item A to a position X unless A and
X are contained in the same or the adjacent domain.

Thus, parameters specify what counts as a domain and determine thereby the actual content of the constraint. For German bounding nodes for subjacency seem to be

$\bar{S}$, NP (universally perhaps), S, PP.

I shall try to demonstrate with a few examples that the English data are compatible with the following subjacency-domains:

$\bar{S}$, NP, PP (not S)

One effect of the different set of parameters, is obvious. In German a wh-item cannot be extracted out of the following configuration:

(62) [comp [$_S$… [$_{PP}$P — —]]]

That accounts for the fact that a preposition cannot be stranded in German.[8]

(63) Who did you talk *about*?
*Wen habt ihr über gesprochen?

Evidence for *PP* as a *bounding node* in *English* and *German*:

1) Extraposition of relative clauses

(64) Which magazine — did you see it in which was lying on the table (Baltin ms.)
*In which magazine — did you see it which was lying on the table
Ein Buch ist erschienen, das mich zu lesen ekelt (literally: A book appeared which to read makes me sick)
*In einem Buch fand ich diese Stelle, das mich zu lesen ekelt.

2) wh-movement

(65) *What did John destroy a book about?
As Horn (1977) showed, the PP is contained by the NP.

3) Left-Branch-Condition (German)

(66) Was hast du gestern — schreckliches gesehen?
(literally: What did you see terrible yesterday)

*Was bist du gestern auf — schreckliches gestossen?

In English, PP and S exclude each other as bounding nodes:

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[8] For a different analysis cp. v. Riemsdijk (1976). I do not discuss his proposal since I am primarily interested in the logic of the argument with respect to contrastive analysis.

(67) Who did you buy this for?

Sentences like (67) would be ruled ungrammatical if both S and PP were bounding as it is the case in German. Crucial data for a choice between S and PP are of the following type:

> If *S is not* bounding and PP is bounding, wh-movement of the whole PP-phrase embedded in a NP should give better results than extracting the wh-word only. If *S is bounding* and not PP on the other hand, there should not be a difference.

The data are not uncontroversial but seem to support the line of argumentation in favor of PP as a bounding node for English:

(68) *Who is a picture of — hanging on the wall?
? Of who is a picture hanging on the wall?

Here the function of the Subject Condition is fulfilled by PP as a bounding node.

In German S is clearly bounding:

(69) *Worüber $[_S$ hast du $[_{NP}$ ein Buch $\overset{\top}{\downarrow}$] zerstört]?

Similar sentences are nicely accounted for by subjacency.

(70) a) Von wem ein Bild zu sehen *freute* Hans?
(literally: Of to see a picture made John happy)
b) *Von wem *freute* ein Bild zu sehen Hans?

Sentence b) shows that the wh-phrase can only go to the first comp. i.e. the comp of the embedded complement sentence. In German the rule of verb-second places the finite verb in a main clause after the first constituent. The ungrammaticality of (70) b) follows from the assumption that *von wem* cannot be in the comp of the matrix sentence since then comp would be the required single constituent for verb-second. Movement to the higher comp is prohibited by subjacency. Notes on counterexamples: The following sentence seems to be a couterexample for S-bounding (Chomsky 1977b) as well as for PP-bounding or the NP-constraint (Horn 1977).

(71) What $[_S$did he express $[_{NP}$ the fear $[_{\bar{S}}[_S$ that I might do —]]]]

Chomsky (forthc.: 19) suggests that there are bridge conditions for wh-movement such that with certain matrix verbs $\bar{S}$ does not count as a bounding node for subjacency, as a marked property of these verbs.

This would not support an S-bounding analysis or the NP-constraint but it supports the analysis where S is not bounding.

(72) *About whom did John destroy a book?

Superficially (72) seems to disconcert the proposed analysis with PP and not S as bounding nodes. The expolanation I want to suggest is examplified by the following data presented by Cullicover and Wexler (1977 : 51).

(73) Mary is the author (*who is) of this book
Which book is Mary the author of?

Susan proposed mercy (*that was) towards the victim.
Who did Susan propose mercy towards?
Horatio measured the length (*which was) of the bridge.
What did Horatio measure the length of?
Sam proposed a solution (*which was) of your problem.
Which problem did Sam propose a *solution of*?
Sam proposed a solution (which was) of little interest.
**How much* interest did Sam propose a *solution of*?
I found a box (which was) of pine
*Which kind of wood did you find a box of?
We cooked the meat (which was) in the refrigerator.
*Whose refrigerator did you cook the meat in.

The ungrammatical result of wh-movement follows from the assumption that the respective cases contain reduced relative clauses. Wh-movement then is prohibited by subjacency.

(74) ...... [$_{NP}$... [$_{\bar{S}}$relative clause]]

The German example in (74) could be used as a counterexample too.

(75) Das Buch [comp [$_{S}$ [$_{\bar{S}}$wh-zu lesen] mich ekelt][9]

Subjacency should rule out this sentence since wh-movement has to cross *S and* S.

(76) Witurd schien [$_{\bar{S}}$ [$_{S}$ [e] betrübt zu sein]]
Witurd seems to be distressed.

As we see from (76) subjacency is permitting movement across S and $\bar{S}$ boundaries provided that they are adjacent, i.e. S is the leftmost proper subtree of $\bar{S}$. The same explanation holds for conjoined structures:

(77) comp wh [$_{S}$[$_{\bar{S}}$ ...] and [...]]

VII. To summarize, the implications for contrastive analysis seem to be: 1) There will be differences in the patterns generated by the base component, explained in parameters of the X-theory. I did not discuss it explicitly but do not want to miss mentioning it since these differences bear on the question of the analysis of sentences in terms of base-generated vs. derived. 2) There will, of course, be differences in the lexicon. The control properties, for instance, are syntactically relevant for contrasts. 3) Among the syntactic principles worth contrasting there will be parameters of subjacency and bounding parameters of case assignment.

Thus a few principles suffice to explain a wide range of data, small changes of the parameters lead to complex differences at the level of the surface.

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[9] For the contrast between English and German in this case I do not have a clear solution. We might assume that in English the subject clause is dominated by NP whereas it is only S in German.

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PRESUPPOSITION[1] AND THE SCOPE OF NEGATION[*]

EWA MIODUSZEWSKA

University of Warsaw

During the discussion on the usefulness of the notion of presupposition in linguistics, two books have been of major importance: *Presupposition and the delimitation of semantics* written by Ruth Kempson, and *Presupposition and non-truth conditional semantics* written by Deirdre Wilson—both of them published in 1975.

Among many arguments for rejection of presupposition which have been gathered and presented in those books, one concerns the behaviour of presupposition in negation. According to the authors, presupposition does *not* remain constant under negation and is cancellable without any explanation even in simple negative sentences with definite noun phrase in subject position, as well as in sentences containing the so called factive verbs such as *regret*, *realize*, etc. and certain aspectuals such as *stop*, *continue*, *quit* etc.

Consequently, we can speak only of presuppositions of simple positive sentences. Working on this assumption, presupposition would have no more explanatory power than entailment, and, at the same time, would make the semantic analysis more complicated than necessary. The way of argumentation in both books is very similar.

The understanding of negation in both publications follows de Morgan's law of logic which says that the negation of conjunction is equivalent to the alternative of negations of particular factors of the conjunction, i.e.:

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[1] Presupposition is understood as logical presupposition and may be defined, following P. Strawson as: "a statement S presupposes a statement S' if and only if, the truth of S' is a precondition of the truth or falsity of S". (Garner 1971 : 29).

$$\sim(P\&Q)=\sim P \vee \sim Q$$ [2]

This framework is taken for granted by D. Wilson and explicitly stated and developed by R. Kempson.

The argument, as presented in the works mentioned above, was repeated, with slight alterations, by R. Kempson in her *Semantic theory* (1977).

Among other arguments against presupposition (such as its behaviour in complex sentences), the one discussing its behaviour under negation takes an important position in the discussion about the notion (although, perhaps, not the basic one— the latter being left for the necessity of justification for introducing three valued logic into the examination of the natural language).

The aim of the present paper is to rediscuss this argument. It is not the aim of the paper to express any opinion on the usefulness or uselessness of presupposition in linguistics, but only to decide whether the argument under discussion really holds if examined within the authors' own framework[3] — but in greater detail than it has been done in the mentioned works, as well as to decide whether the theoretical framework adopted for negation is justifiable.

Ruth Kempson's and Deirdre Wilson's argumentation presented in order to prove that presupposition does not remain constant under negation falls into three parts.

A. It happens that presupposition which holds in a positive sentence does not hold in its congener negative sentence (without any overt cancellation), although it should according to the definition. The following example is to prove it[4]:

1. John hasn't stopped beating his wife
2. John has stopped beating his wife

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[2] Kempson (1975 : 12); Kempson (1977 : 128). D. Wilson does not introduce de Morgan's law explicitly. However, because of her references to R. Kempson (1975 : 107), as well as of the results of the analyses of particular sentences (which are very similar to those of R. Kempson and hardly attainable by purely intuitive insight), it seems that she accepts the interpretation of negation in agreement with de Morgan's law.

[3] It is also not the aim of the paper to decide whether negation is or is not ambiguous if viewed against any other framework than the one suggested by Ruth Kempson.

[4] Examples 1—14 are taken from the discussed works as representative for presented arguments. Numbers 15—18 are developed examples of Ruth Kempson. Polish examples are not direct translations of the English ones but form their equivalents, so that the conducted reasoning could be verified or rejected (or the difference in its application shown) on the basis of both English and Polish data.

1a. Janek nie przestał bijać swojej żony
2a. Janek przestał bijać swoją żonę

Within the three valued logic system both 1, 2 and 1a, 2a presuppose respectively:

3. John was beating his wife
3a. Janek bijał swoją żonę

According to the authors, the negative sentence 1 (1a) may be interpreted as:

4. Either John continues to beat his wife or he has never done it
4a. Albo Janek nadal bija swoją żonę albo też nigdy tego nie robił

which is to follow from the quoted de Morgan's law. Thus, presupposition seems not to hold under negation, which goes against its definition and heavily diminishes its explanatory power.

B. Presupposition can be overtly suspended (cancelled) in negative sentences without producing contradictory statements, which again, according to the authors, is contradictory to its definition. This cancellation applies both to existential cases and to the turth of factive verbs complements.

5. The King of France didn't come to the reception as the King of France doesn't exist
5a. Król Francji nie przybył na przyjęcie, ponieważ Król Francji nie istnieje

In those examples, presupposition

6. The King of France exists
6a. Król Francji istnieje

is suspended.

7. Mary doesn't regret that her grandma died—because her grandma didn't die
7a. Maria nie żałuje, że jej babcia umarła, ponieważ jej babcia nie umarła

In 7 and 7a presupposition
8. Mary's grandma died
8a. Babcia Marii umarła

is cancelled.

C. The mechanism of presupposition suspension is asymmetrical, i.e. presupposition can be cancelled in negative sentences without resulting in contradiction but an attempt of its suspension in the congener positive sentences produces contradictory statements.[5]

Existential cases:

9.* The Mayor of Liverpool visited the exhibition this year though there is no Mayor of Liverpool.

10. The Mayor of Liverpool did not visit the exhibition this year, as there is no Mayor of Liverpool any longer.

9a.* Burmistrz miasta Liverpool zwiedził w tym roku wystawę, chociaż Liverpool nie ma burmistrza.

10a. Burmistrz miasta Liverpool nie zwiedził w tym roku wystawy, ponieważ Liverpool nie ma już burmistrza.

11.* John has spent the morning at the local swimming pool though there is no swimming pool here.

12. John has not spent the morning at the local swimming pool—there isn't a swimming pool in this town.

11a.* Jan spędził przedpołudnie na miejscowym basenie, chociaż nie ma tu basenu.

12a. Jan nie spędził przedpołudnia na miejscowym basenie, ponieważ w tym mieście nie ma basenu.

Complements of factive verbs:

13.* Sue realized that Bill had been unfaithful to his wife, though he had in fact never been ungaithful.

14. Sue didn't realize that Bill had been unfaithful to his wife — how can she have done when he never has?

13a.* Zuzanna zdała sobie sprawę, że Bill zdradzał swoją żonę, chociaż tak naprawdę on jej nigdy nie zdradzał.

14a. Zuzanna nie zdawała sobie sprawy, że Bill zdradzał swoją żonę — jak mogła zdać sobie z tego sprawę, skoro on jej nigdy nie zdradzał?

An examination of such example leads the authors to the conclusion that presupposition is inherent only in positive sentences, behaving differently in negative sentences. That is why it is false to say that presupposition remains constant under negation.

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[5] Unless special phrasing is adopted, some Polish negative sentences would hardly allow for presupposition cancellation, e.g.
?Zuzanna nie zdawała sobie sprawy, że Bill zdradzał swoją żonę, bo on jej nie zdradzał.
(Sue didn't realize that Bill had been unfaithful to his wife because he was not).
Similarly, if special phrasing is introduced, some positive sentences seem to allow for such a cancellation.
Edward regretted that Mary had failed although it finally turned out that she hadn't.

The authors admit that arguments B and C could be rejected and the presuppositional framework maintained if there was a posssibility of considering negation as ambiguous, e.g. of distinguishing between "internal" and "external" negation[6] — external negation being an alternative of negations of all possible components or truth conditions of the sentence, and internal negation constituting solely the negation of an appropriate affirmative sentence. Then, within the presuppositional framework, cases in which presuppositions can be cancelled in negative sentences would constitute a separate, external sense of negation. This would explain why those presuppositions cannot be cancelled in the appropriate positive statements where this "separate sense" naturally does not appear. „Thus the entailment account is to be preferred unless the negative sentences can .... be shown as ambiguous".[7] Argument A is primarily based on the analysis of sentences with such verbs as *stop, continue, start, quit*, etc.

Reexamination of the arguments

Arguments B and C are valid only if negation is assumed to be non-ambiguous. R. Kempson accepts this assumption as true, basing on the data obtained by the application of two formal procedures she introduces; the procedures are — the ambiguity test and the understanding of negation as functioning in agreement with de Morgan's law of the negation of conjunction.

The Ambiguity test

According to Kempson, if some verb phrase is two ways ambiguous, then we can predict that when it is conjoined to a *do so* or other verb phrase pro-form expression, the entire sentence would be two ways ambiguous. Whichever interpretation is implied, the *do so* expression must be identical to that interpretation. It follows that if the sentence is ambiguous and the attempt to disambiguate it is made, by putting the actual explanation of the action in place of the pro-form, we would arrive at a contradictory sentence.[8]

It seems that this test, though very helpful to show syntactic or lexical ambiguity within a sentaence[9], is invalid if used to disambiguate a sentence between its presupposition-free and presupposition-carrying interpretations (i.e. if applied to disambiguating relations holding between two sentences). What the authors want to prove by introducing the test, is that, for example, the sentence

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[6] D. Wilson accepts the possibility of interpreting negation as two ways ambiguous with internal negation (in which presupposition is preserved) constituting the preferred interpretation and external negation (usually marked with a heavy stress or with an overt denial of presupposition) being presupposition free. However, having to choose between ambiguous or non-ambiguous understanding of negation she favours the second solution: "... on the entailment analysis of negation there is no ambiguity: merely a disjunctive set of truth-conditions, the truth of any of which is sufficient for the truth of the negation" (1975 : 35). The entailment analysis is the one she accepts within the truth-conditional semantics.

[7] Kempson (1977 : 147).

[8] Kempson (1975 : 15); Kempson (1977 : 128—132).

S. *The King of France didn't come to the reception*

is non-ambiguous between its presupptsoiion-free (S.... because he doesn't exist) and presupposition-carrying (S.... because he doesn't like receptions/ but exists/) interpretations. To do this, they apply the test, arriving at something like

S^1. *The King of France didn't come to the reception* and George didn't do so, either; The King didn't because he doesn't exist and George didn't because he doesn't like receptions.

Since S^1 is not contradictory, the authors conclude that S is not-ambiguous. Is seems, however, that S_1 has nothing to do with disambiguating S between its presupposition-free and presupposition -carrying interpretations.
In S_1 the disambiguating element is a *do so* expression. As it stands for a Verb Phrase *come to the reception*, it could show the ambiguity of this particular VP if there was any, but it cannot be helpful to disambiguate the sentence between its presupposition-carrying and presupposition-free interpretations. The choice of the conjoin (George didn't do so either ... because he doesn't like receptions) doesn't help to do this either, since it does not introduce the presupposition carrying interpretation of S (existence of the King) as opposed to its presupposition-free interpretation stated overtly (The King didn't come to the reception .... because he doesn't exist). The test, as applied by the authors, cannot be accepted as conclusive, because, not confronting presupposition-carrying and presupposition-free interpretations of a negative sentence, nothing can be said about its ambiguity or non-ambiguity as far as those interpretations are concerned.

It seems possible to modify the test so as to escape its mentioned drawbacks. The *do so* expression would be of no importance then and the test would have to introduce the opposition between presupposition-free and presupposition-carrying interpretations of a sentence. But when we would arrive at contradictory sentences (contradiction being parallel to this of examples 9 (9a); 11 (11a); 13 (13a)):

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[9] For example in:

• John doesn't like visiting relatives and George doesn't do so, either; John because he hates going out and George because he doesn't like having people at home. the test shows the syntactic ambiguity of *visiting relatives*.

15.* The King of France didn't come to the reception and his sister didn't, either; the King didn't because he doesn't exist and his sister didn't because she doesn't like receptions.

15a.* Król Francji nie przybył na przyjęcie i jego siostra nie przyszła także; Król nie przyszedł ponieważ nie istnieje, a jego siostra nie przyszła ponieważ nie lubi przyjęć.

16.* John hasn't spent the morning at the local swimming pool and Jack hasn't done so, either ;John hasn't because there is no swimming pool in the town and Jack hasn't because he doesn't like this particular swimming pool.

16a.* Jan nie spędził przedpołudnia na miejscowym basenie i Jacek nie zrobił tego także; Janek — ponieważ w mieście nie było basenu, a Jacek — ponieważ tego właśnie basenu nie lubił.

17.* Mary doesn't regret that her grandma died and Mary's sister doesn't, either: Mary doesn't because she has inherited a lot of money and her sister doesn't because she knows that her grandma hasn't died.

17a.* Maria nie żałuje, że jej babcia umarła i siostra Marii nie żałuje tego również; Maria — ponieważ odziedziczyła dużą sumę pieniędzy, a jej siostra — ponieważ wie, że babcia nie umarła.

18.* Sue didn't realize that Bill had been unfaithful to his wife and his wife didn't either; his wife didn't because she was too stupid to have noticed anything although it was quite evident and Sue didn't because it was not true.

18a.* Zuzanna nie zdawała sobie sprawy, że Bill zdradzał swoją żonę i jego żona nie zdawała sobie z tego sprawy również; żona — ponieważ była zbyt głupia, żeby zauważyć cokolwiek chociaż było to całkiem widoczne, a Zuzanna — ponieważ nie było to prawdą.

Considering the test as conclusive, it would follow from the above examples that negative sentences are ambiguous between their presupposition-carrying and presupposition-free interpretations.

The Mechanism of negation functioning along the lines of de Morgan's law.

According to Kempson (1975), the other proof for non-ambiguity of negation is to follow from the theoretical framework explaining the functioning of negation — the framework based on de Morgan's law:

$$\sim(P\&Q) = -P \vee -Q$$

This law is to operate upon the formula (Spec X_i)([S]X_i)[10] and all its derivatives. This formula is to apply to all Nominal Phrases, both definite and indefinite, due to the fact that in the Deep Structure there is a marker [+Def] (definite) which is either introduced in the process of derivation or omitted, thus resulting in definite or indefinite NPs respectively.[11] The formula (Spec X_1) ([S]X_1) reads as: some fixed object has the attribute [S]. Negation of this formula results in: A/(Spec X_1)([S]X_1) with A (=antonymy) being a symbol of negation. Then, according to Kempson in agreement with de Morgan's law the equivalence

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[10] Kempson (1975 : 120).

$$A/(\mathrm{Spec}\ X_1)([S]X_1) = (A/\mathrm{Spec}\ X_1)([S]X_1)v(\mathrm{Spec}\ X_1)A/([S]X_1)$$

is obtained. This equivalence reads as "if it is not true that some fixed object has the attribute [S], then, either there is no such fixed object or there is some fixed object but it does not have the attribute [S]".[12] Thus, the mechanism of negating the existence of an object is to be exactly the same as this of negating any feature of the object, which would point to the homogeneous nature of negation (the more so as the presented formula is to be a starting point for the formulae of all more complicated sentences).

As it follows from the reading of the negation of the formula, as well as from the formulation that (Spec X_1) means that an/the NP refers to a single object (which is paraphrasable to: there is a fixed object X_1), (Spec X_1) acts in the formula as the existential quantifier $\overset{\vee}{x}$. If so, from the point of view of logic the whole formula does not consist of a conjunation of sentences or propositions but constitutes a single sentence.[13] Not being a conjunaction of sentences it does not allow de Morgan's law to apply in the way suggested by Kempson as the application of de Morgan's law to quantified formulae is entirely different $(-\overset{\vee}{{}_{x\epsilon}X}\ \varphi(x) \equiv \overset{\frown}{{}_{x\epsilon}X} \sim \varphi(x))$[14] and, naturally, does not lead to any of the conclusions suggested by the author. Thus, the whole formula:

$$A/(\mathrm{Spec}\ X_1)([S]X_1) \equiv (A/\mathrm{Spec}\ X_1)([S]X_1)v(\mathrm{Spec}\ X_1)A/([S]X_1)$$

if understood in the way presented above (and this seems to be the understanding advocated by the author, and, at the same time, the only one possible) has no logical justification whatsoever.[15] This formula however underlies the theoretical handling of both: sentences with existential cases

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[11] The whole process is of no importance for the presented examination.

[12] As Mr Neubauer pointed out we have a negation of a proposition on the left side of the equation and a negation of a predicate in the second component of the alternative on the right side of the equation. To have this, there should be given a logically justified definition of a well-formed formula as understood by Kempson.

[13] I owe this observation to dr Jacek Jadacki of the Institute of Logical Semiotics, Department of Philosophy, University of Warsaw.

[14] Rasiowa H. (1977 : 221).

[15] Unless a different logical framework for the application of de Morgan's law is introduced or the logical framework is abandoned altogether and the formula defended on the grounds of capturing an important linguistic generalization.

The King bought a/the chandelier
$(\mathrm{Spec}\ X_1)([K]X_1.(\mathrm{Spec}\ X_2)([C]X_2.[B]X_1X_2))$

and with complements of factive verbs

The King regrets that the Queen is sick
$(\mathrm{Spec}\ X_1)([K]X_1.\ (\mathrm{Spec}\ X_2)([P]X_2.\ [\mathrm{Regret}]\ X_1X_2))$[16]

As in none of the cases, the derivatives of the basic formula result in a conjunction of sentences, to none of them, while forming the negative counterpart, can de Morgan's law apply in the way it is done by the author. Thus nothing specific can be deduced as to ambiguity or non-ambiguity of negation on the basis of this framework.

Kempson's model of 1977, though not elaborated in detail, seems to differ slightly from this of 1975. In *Semantic Theory* she says that "if we have a sentence P whose semantic representation is the set of conditions $[M_1]\&\&[M_2]\&[M_3]\&[M_4]$, the negation of that sentence will have as its semantic representation $-[M_1]\mathrm{v}-[M_2]\mathrm{v}-[M_3]\mathrm{v}-[M_4]$", which again is based on de Morgan's law. The framework has to face various problems, depending on the way in which the truth conditions $M_1, M_2, M_3, \ldots$ are defined. If one of the conditions is that *There exists a fixed object*, then the conjunction of conditions stops being a conjunction, de Morgan's law cannot apply — and the whole reasoning loses its logical foundations. If, on the other hand, the set of conditions in the conjunction does not include the one of existence, but follows (as it seems to be the case in the model of *Semantic theory*) from the componential analysis of particular lexical items, the conjunction holds and de Morgan's law can be applied. But then, the denial of the existence of a particular object referred to by an NP would *not* follow from this framework and the sentence such as:

The King of France isn't bald

would still presuppose the existence of the King, which the author wants to prove is not the case. Finally, if some special formal device is introduced to cope with the denial of existence, with other cases of negation remaining explicable within de Morgan's law terms, it would point to the non-homogeneous nature of negation, which in turn would support the theory of its ambiguity; this is again what the author wants to avoid. Other types of difficulties arise when an explanation of sentences with factive verbs complements along the lines of the presented framework is attempted. Within the framework of 1975, the sentence:

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[16] Kempson (1975 : 121; 133).

S. The King does not regret that the Queen is sick[17] is true, if

a. The King does not exist

or

b. There is some fixed object but it does not have the features of the King

or

c. There is nothing for the King to regret

or

d. The Queen does not exist

or

e. There is some fixed object but it does not have the features of the Queen

or

f. The Queen is not sick

or

g. There is no act of regretting performed

Not going into the question of existence for the reasons explained above, conditions b, e, f, g are left for analysis.[18] Concentrating on conditions f and g, the following reasoning (which seems to be in full agreement wiht models of both 1975 and 1977) may be performed.

Two of the truth conditions of the sentence

The King regrets that the Queen is sick

are:

$[M_1]$= The King regrets something
$[M_2$= The Queen is sick

The conjunction of the conditions is:

$[M_1]\&[M_2]$= The King regrets something and The Queen is sick

It follows from de Morgan's law that the sentence

S. The King does not regret that the Queen is sick is true if $-[M_1]v-[M_2]$

i.e.

The King does not regret anything

or

Queen The is not sick

Because of the fact that *or* (v) in the alternative above is the inclusive *or* and cannot be interpreted as the exclusive *or* (with which R. Kempson fully agrees[19]), S will be true if at least one of the components of the alternative $-[M_1]\vee-[M_2]$ is true or if both of them are true at the same time. It follows that *S* should be true under the following conditions:

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[17] The thorough analysis of this sentence, leading to the presented conclusions is carried out by Kempson (1975 : 133–4).

[18] The discussed conditions which are said to exhaust all the possibilities of the interpretation of S do not include conditions such as:

The King doesn't regret that the Queen is sick
because he doesn't know that she is sick.

1. $-[M_1]$=false and $-[M_2]$=true:
   The King regrets that the Queen is not sick
2. $-[M_1]$=true and $-[M_2]$=true:
   The King does not regret that the Queen is not sick
3. $-[M_1]$=true and $-[M_2]$=false:
   The King does not regret that the Queen is sick

Condition 1 is clearly incompatible with *S*, and 2 is highly questionable as a truth condition of *S*. Only the third condition (which preserves the presupposition of *S*) is unquestionable but, being identical with the sentence under discussion, provides hardly any insight into the mechanism of negation.

The conducted examination seems to prove that the theoretical framework of negation presented by Ruth Kempson, apart from being logically faulty, does not provide a fully explanatory insight into the mechanism of negation. Nothing can also be deduced from the presented framework as to ambiguity or non-ambiguity of negative sentences between their presupposition-free and presupposition-carrying interpretations. Since arguments *B* and *C*, as presented by Kempson, stand on the assumption that negation is non-ambiguous, they simply do not hold when viewed within the discussed theoretical framework.

A. Argument A is stronger than arguments B and C as it suggests that presupposition does not hold without any concellation in certain negative sentences. Those sentences are primarily sentences with the so called aspectuals such as *stop*, *quit*, *start* etc. According to Wilson and Kempson such sentences, if examined along the lines of de Morgan's law, allow for the interpretation in which their presupposition is contradicted. The authors, however, do not carry out the analysis step by step but only give the final results, according to which examples 1, (1a) are interpreted as 4, (4a)[20]. It seems that the anylsis carried out in detail a) does not lead to exactly the same results as those presented by the authors; b) leads to interpretations contradictory to native speakers' intuition; c) does not provide a full insight into the meaning of discussed sentences. The analysis of the examples:

1. John hasn't stopped beating his wife
1a. Janek nie przestał bijać swojej żony

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[19] Kempson (1975 : 16); Kempson (1977 : 126—127).

[20] Interpretations 4, (4a) result from the analysis within which only the verb falls within the scope of negation. This allows to omit the problem of the denial of existence. Consequently, the reexamination of this analysis is limited in the same way.

with *to stop* (przestać) interpreted as "to perform the action *X* before the time *t* and not to perform the action *X* after the time *t*" (wykonywać czynność *X* przed czasem *t* i nie wykonywać czynności *X* po czasie *t*) would run as follows: positive counterparts of 1, 1a are equivalent to:

19. John performed the action of beating his wife before the time *t* and John hasn't performed the action of beating his wife after the time *t*.
19a. Janek wykonywał czynność polegającą na biciu żony przed czasem *t* i Janek nie wykonuje czynności polegającej na biciu żony po czasie *t*.

and further on, to:

20. John beat his wife before the time *t* and John hasn't beaten his wife after the time *t*.
20a. Janek bijał swoją żonę przed czasem *t* i Janek nie bija swojej żony po czasie *t*.

As both 20 and 20a clearly constitute a conjunction of two sentences each, de Morgan's law can be justifiably applied. The application results in:

21. John didn't beat his wife before the time *t* or John has beaten his wife after the time *t*.
21a. Albo Janek nie bijał swojej żony przed czasem *t* albo bija ją po czasie *t*.

The interpretations of 1, 1a, which result directly from the application of de Morgan's law are not identical with the interpretations of 1, (1a) suggested by Kempson and Wilson

4. Either John continues to beat his wife or he has never done it.
4a. Albo Janek nadal bija swoją żonę albo też nigdy tego nie robił.

No implication of John's "continuing" the action (=beating before the time *t* and beating after the time *t*) follows from the application of de Morgan's law. Also the fact that he has *never* done it is dubious but may be justified if the time *t* is understood as the time of producing the sentence. Whether 21, 21a can be accepted as interpretations of 1, 1a respectively is to be judged by the intuitions of native speakers, e.g. the author of the present paper would not agree that the Polish sentence:

1a. Janek nie przestał bijać swojej żony

allows for the interpretation:

22. Janek nigdy jej nie bijał (John has never beaten her) unless it is overtly stated and explained. Taking into consideration the possibility that some native speakers might agree with such an interpretation, let us examine the results of the proposed analysis applied consequently to other sentences.

23. John hasn't started beating his wife
23a. Janek nie zaczął bijać swojej żony
24. John hasn't died
24a. Janek nie umarł

23 and 23a will be analysed in the following way:

John not [did not perform the action of beating before the time *t* and has performed the action of beating after the time *t*] his wife.

which is equivalent to:

John not [did not beat before the time *t* and has beaten after the time *t*] his wife.

After applying de Morgan's law we get the string which may be paraphrased as:

25. Either John beat his wife in the past or he doesn't beat her nowadays.
25a. Albo Janek bijał swoją żonę w przeszłości albo nie bija jej teraz.

This analysis does not bring up the most natural interpretation of 23 and 23 namely:

26. John didn't beat his wife in the past and doesn't beat her nowadays.
26a. Janek nie bijał i nie bija swojej żony.

The interpretation provided by 25, 25a seems to go strongly against native speakers' intuition. It becomes even more visible while analysing 24, 24a with *to die* being paraphrasable as *to stop living* which in turn is paraphrasable as *to live before the time t and not to live after the time t*. After the application of de Morgan's law one arrives at:

27. Either John didn't live before a certain time or he lives after this time.
27a. Albo Janek nie żył w przeszłości albo żyje teraz

This analysis again does not favour the most natural interpretation of 24, 24a, that is:

28. John lived in the past and lives now
28a. Janek żył i żyje.

Besides, it seems that 27, 27a do not agree with native speakers' intuition as interpretations of 24, 24a.

The presented analysis also poses a theoretical problem. R. Kempson and D. Wilson, while discussing negation, declare an acceptance of a consequent two-valued logic framework and inclusive interpretation of *or*. Within this framework the truth table for alternative states, as it has been already mentioned, that a sentence is true if at least one of the components of the alternative is true. Thus, assuming that 21, 25 and 27 express the meaning of 1, 23 and 24 respectively (having, of course, the same truth value), it would follow that 1, 23 and 24 can be true, each under three various incompatible conditions:[21]

1. John hasn't stopped beating his wife true, if
a. John didn't beat his wife in the past and beats her nowadays (=John has started beating his wife)

or

b. John has never beaten his wife

or

c. John beat and continues to beat his wife
23. John hasn't started beating his wife

True, if

a. John beat his wife in the past and doesn't beat her nowadays (=John has stopped beating his wife) or

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[21] Defining of the conditions results from the following reasoning:

~(John has stopped beating his wife) = John hasn't stopped beating his wife

&

John has stopped beating his wife = John beat his wife before the time *t* and John hasn't beaten his wife after the time *t*.

&

~(John beat his wife before the time *t* *and* John hasn't beaten his wife after the time *t*) = John didn't beat his wife before the time *t* *or* John has beaten his wife after the time *t*

It follows that

I John hasn't stopped beating his wife = II John didn't beat a{his wife before the time *t*} or John has beaten b{his wife after his wife after the time *t*}

I and II must, of course, have the same truth value.
From the truth table for alternative II is true if:
1. a=1 and b=1 which results in i) John didn't beat his wife in the past and beat her nowadays
2. a=1 and b=0 which results in ii) John has never beaten his wife
3. a=0 and b=1 which results in iii) John beat and continues to beat his wife

In each of the cases (i, ii, iii) I must also be true.

b. John has always beaten his wife

or

c. John didn't beat his wife in the past and doesn't beat her presently

24. John hasn't died

True, if

a. John didn't live in the past and lives now (=John was born)

or

b. John has never lived

or

c. John lived in the past and continues to live now.

Accepting the suggested framework one has to agree that each of those sentences (1, 23, 24) may be true for three various, incompatible reasons, in this way being three ways ambiguous or at least vague. What is more, (a) and (b) of each case clearly differ in character when compared with (c), which the analysis does not show. Finally, (a) interpretations go definitely against native speakers' intuition with (b) being highly questionable. The conclusions to which the analysis advocated by R. Kempson and D. Wilson leads, seem to justify the rejection of the analysis as invalid. Thus, the question whether sentences such as 1, 23, 24 may be interpreted in the way contradictory to their presuppositions remains open for native speakers' intuition to decide but there is no theoretical justification (as far as Wilson's and Kempson's frameworks are concerned) that this is the case.

Since neither arguments B and C nor argument A seem to hold when examined thoroughly on the basis of both English and Polish data, the problem of the behaviour of presupposition under negation, cannot be solved within R. Kempson's and D. Wilson's framework, the more so, as the framework itself seems to be faulty, at least at certain points.

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THE PLACEMENT OF ADVERBS IN PRINCIPAL AND SUBORDINATE CLAUSES IN ENGLISH AND SWEDISH

Sven Jacobson
Stockholm University

In English there is not much difference between principal and subordinate clauses as regards adverb placement. The differences that do occur are sometimes due to structural constraints, as when we cannot have adverbs in clause-initial position in relative clauses where the relative word is subject, e. g. in (1).

(1) John, who *unfortunately* had not been able to come, did not get anything.

Here *unfortunately* has to be placed after *who* although it normally occurs clause-initially. Sometimes a difference in placement is limited to a particular adverb. For example, *ever* never occurs in the initial position in principal clauses, whereas this position can very well be used in certain subordinate clauses, as in *b* and *c* of (2).

(2) a. **Ever* Dick comes back.
b. Dick will be punished if *ever* he comes back.
c. Come back as soon as *ever* you can.

In Swedish it is a normal feature for a large number of adverbs to be differently placed in principal and subordinate clauses in relation to finite auxiliaries and finite verbs.[1] In principal clauses post-position in relation to these constituents is the rule, while in subordinate clauses pre-position dominates. Example (3) illustrates this shifting, which is imitated in the English versions, although it is here not associated with the change of clause type.

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[1] Cf. Wijk-Andersson (1977 : 1—2) with its reference to Beckman (1955 : § 225), Collinder (1974 : §§ 796—808), Wessén (1968 : 212—213), Thorell (1973 : §§ 772—773), and Nylund-Brodda and Holm (1972 : § 907).

(3) a. Peter har *alltid* varit vänlig mot mig.
Peter has *always* been kind to me.
b. Jag tycker om Peter, därför att han *alltid* har varit vänlig mot mig.
I like Peter because he *always* has been kind to me.

Let us now try to use the opposite order in both the Swedish and English versions of (3).

(4) a. *Peter *alltid* har varit vänlig mot mig.
Peter *always has* been kind to me.
b. Jag tycker om Peter, därför att han har *alltid* varit vänlig mot mig.
I like Peter because he has *always* been kind to me.

Here we note first of all that the pre-position of *alltid* in (4a) is ungrammatical. Moreover, this adverb can take up post-position in a subordinate clause only in case the clause content is asserted as in (4b), where *därför att* can be replaced by *ty* 'for', (Cf. Andersson 1975:18—19; 61—62). In English, where the shifting is not due to clause type, the order *always has* often has an emphasizing function, but it is sometimes, especially in American English, used with no more emphasis than the order *has always.*[2]

Only certain Swedish adverbs, e.g. *bara* 'simply' and *kanske* 'perhaps', can take up the position of *alltid* in (4a) in a principal clause. See (5) and (6).

(5) Han *bara* har uteblivit.
He *simply* has stayed away.
(6) Hon *kanske* har missförstått dig.
She *perhaps* has misunderstood you.

Let us now study the possibility of placing an adverb into a verb phrase with a compound auxiliary, as in (7) and (8).

(7) a. *Jag *aldrig* skulle ha försökt att fly, även om jag haft chansen.
I *never* would have tried to escape, even if I had had the chance.
b. Jag skulle *aldrig* ha försökt att fly,...
I would *never* have tried to escape,...
c. *Jag skulle ha *aldrig* försökt att fly,...
I would have *never* tried to escape,...

(8) Han var den typ av fånge
He was the type of prisoner

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[2] It is worth noting in this connection that English also has certain principal-clause phenomena that can occur in subordinate clauses when the speaker desires to be understood as committed to the truth these clauses express. Compare, for example, (i) and (ii), which have been borrowed from Green (1976 : 384).
(i) *Bobby realized that *frankly,* he never had a chance.
(ii) I'm afraid that *frankly,* he hasn't a chance.

(a) som *aldrig* skulle ha försökt att fly, även om han haft chansen.
who *never* would have tried to escape, even if he had had the chance.
(b) *som skulle *aldrig* ha försökt att fly,...
who would *never* have tried to escape,...
(c) *som skulle ha *aldrig* försökt att fly,...
who would have *never* tried to escape,...

The relative clause in (8) is not an assertion, and therefore Swedish would hardly have *aldrig* in post-position in relation to *skulle* or *ha*. In the English *c* version of (7) and (8) the unusual position of *never* after a compound auxiliary gives it a certain emphasis. As regards the pre-position of *never* in the English *a* versions, compare what is said above about *always has* in (4a).

In (3)—(4) and (7)—(8) the English adverb is less restricted in its placement in relation to auxiliaries than the corresponding Swedish adverb and this is also true of many other types of adverbs. There are, however, English adverbs that are more restricted than their Swedish equivalents, namely verb-modifying adverbs of degree and manner. Compare, for example:

(9) a. *Han *fullständigt* måste ha glömt det.
*He *completely* must have forgotten it.
b. Han måste *fullständigt* ha glömt det.
*He must *completely* have forgotten it.
c. Han måste ha *fullständigt* glömt det
He must have *completely* forgotten it.
(10) a. Hans fru säger att han *fullständigt* måste ha glömt det.
*His wife says that he *completely* must have forgotten it.
b. Hans fru säger att han måste *fullständigt* ha glömt det.
*His wife says that he must *completely* have forgotten it.
c. Hans fru säger att han måste ha *fullständigt* glömt det.
His wife says that he must have *completely* forgotten it.

In English, adverbs modifying the main verb cannot precede finite or nonfinite auxiliaries.[3] Swedish is less restricted in this respect, which may be further illustrated by (11) with the manner adverb *direkt* and (12) with the degree adverb *helt* in the pre-auxiliary position.

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[3] It is worth noting, however, that certain finite auxiliaries themselves can sometimes be modified by verb-modifying adverbs. These can then stand in pre-position, as in (i), where the state of volition expressed by *would* is modified by *very much*, or in post-position, as in (ii), where the possibility denoted by *can* is characterized as being within easy reach. See Jacobson (1975 : 456—458) and (1978 : 54, 56). Cf. Quirk et al. (1972 : 451).

(i) I *very much* would prefer to stay at home.
(ii) Such a situation can *easily* be imagined.

(11) ...växter som *direkt*
kan ta upp kväve ur luften. (Dagens Nyheter, 14 Dec. 1978)
...plants which can *directly* take up nitrogen from the air.

(12) Det är obegripligt hur rapporten ... *helt* har kunnat bortse
från den ... glädje som dansen innebär för barn.
(Svenska Dagbladet, 3 Jan. 1979)
It is incomprehensible that the report should have *totally*
ignored the joy that dancing is to children.

In both (11) and (12) the Swedish adverb can alternatively be placed after the finite auxiliary and in (12) also between the auxiliaries. In my opinion all the three versions of (13) and four versions of (14) are likewise acceptable, whereas their English translations (15) and (16) show that the choice of position in English is restricted to placement after or immediately before the main verb.

(13) a. Han är en man som *dyrt* har måst betala för sitt misstag.
b. Han är en man som har *dyrt* måst betala för sitt misstag.
c. Han är en man som har måst *dyrt* betala för sitt misstag.

(14) Det är otroligt att denna stora borg
(a) *fullständigt* ska ha blivit jämnad med marken.
(b) ska *fullständigt* ha blivit jämnad med marken.
(c) ska ha *fullständigt* blivit jämnad med marken.
(d) ska ha blivit *fullständigt* jämnad med marken.

(15) He is a man who has had to pay *dearly* for his mistake.

(16) It is unbelievable that this big castle should have been *completely*
levelled with the ground.

As far as I can judge, none of the adverb positions in (13) and (14) makes the adverb essentially more prominent than the others do. Nor is the meaning changed in any way. Version *a* would no doubt be most people's choice, especially in writing. The important thing here, however, is not frequency but acceptability.

What can be the reason for this movability of Swedish verb-modifying adverbs in relation to auxiliaries? It is especially striking in subordinate clauses, but occurs, as shown by (9 b and c), also in principal clauses, though to a lesser extent. Syntactic variation where no special difference in prominence or meaning is involved is a sign that a change is going on. Word order variation of this type can be expected in Swedish, which from a typological point of view is in a state of transition from SOV to SVO order. It can also be expected in English, which is described by Lehmann (1973:50) as an "inconsistent VO language". Among word-order features of consistent OV and VO languages we may note (cf. Vennemann 1974:79):

OV	*VO*
(a) object — verb	(a) verb — object
(b) adverbial — verb	(b) verb — adverbial
(c) main verb — auxiliary	(c) auxiliary — main verb

Swedish sentences exemplifying the OV order can easily be found:

(17) De har ingenting lärt och ingenting glömt. (a).
They have learnt nothing and forgotten nothing (literally 'nothing learnt and nothing forgotten')

(18) De har fullständigt missuppfattat det hela. (b).
They have completely misunderstood the whole thing.

(19) Han har gjort allt som tänkas kan. (c).
He has done everything imaginable (literally 'that be imagined can')

While the adverbial-verb order of (18) is common both in Swedish and English, the OV features of (17) and (19) have no counterpart in present-day English. In Swedish they sound a bit old-fashioned and only occur in certain contexts. In earlier stages of both English and Swedish they were, however, quite frequent. As far as these particular word-order features are concerned it appears, then, that English is slightly in advance of Swedish in the development towards a more consistent VO language.

Let us now as a typological game give the relative clause in (11) consistent OV order as far as the above features are concerned:

(20) ...växter som kväve ur luften direkt uppta kan.
...plants which nitrogen from the air directly uptake can.

If we use this clause to illustrate the historical development from SOV to SVO word order in Swedish, we may set up the following series of changes, which Swedish shares with English:

(21) a. The auxiliary is moved to the position immediately before the main verb. This change has the consequence that the adverb comes to take up pre-position in relation to the auxiliary:
...växter som kväve ur luften direkt kan uppta.
...plants which nitrogen from the air directly can uptake.

b. The strong object and adverbial phrase are moved to the final position, Here, they receive more prominence than in mid-position, but the movement has also a disambiguating function since it makes it quite clear that *som* (*which*) is subject and *kväve* (*nitrogen*) object:
...växter som direkt kan uppta kväve ur luften.
...plants which directly can uptake nitrogen from the air.

c. The adverbial particle in ***uppta*** (*uptake*) is moved to post-position. This is a change that is ongoing for Swedish ***uppta*** but completed for English *uptake*.[4] Though forms like *ta upp* were originally felt as informal, they are becoming more frequent also in Swedish formal prose.
...växter som direkt kan ta upp kväve ur luften (=11).
...plants which directly can take up nitrogen from the air.

A further change that has not taken place in the Swedish version of (11) but is optional in Swedish and compulsory in English is movement of *direkt* (*directly*) to the position before the main verb, as in (22).

(22) ...växter som kan direkt ta upp kväve ur luften.
...plants which can directly take up nitrogen from the air. (=11)

All historical changes of these types in Swedish have not taken place precisely as suggested above. For example in (23) change *b* has taken place but not *a*.

(23) Han är den största idiot som tänkas kan på den här sidan jordklotet.
He is the greatest idiot imaginable (literally 'that be imagined can') on this side of the globe.

In texts from earlier periods of English it is possible to find examples of the same variable placement of verb-modifying adverbs in relation to auxiliaries as in present-day Swedish, e.g.

(24) Ða on ðam timan þe se cristena and se gode theodosius *fullice* on god ælmihtigne wæs belyfed 'Then at the time when the Christian and good Theodosius was *fully* trusting in God'
(*The Seven Sleepers*, beginning of the 11th century)

(25) ...hystoryes which *gretely* haue prouffyted oure mortal lyf 'stories which have *greatly* profited our mortal life' (*The Prologues and Epilogues of William Caxton*, latter part of the 15th century)

As shown by (9a) and 10a), Swedish principal clauses differ from subordinate ones in not allowing verb-modifying adverbs to prepose a finite auxiliary or verb, and one might ask why this difference obtains. A plausible explanation can be found in Givón's statement (1976) that "main clauses (and in particular declarative-affirmative ones) are the most progressive, innovative environment in language, where innovations are first introduced and from where they spread later on into other environments".[5] If, as has been assumed above, pre-auxiliary placement of verb-modifying adverbs in Swedish is due to the change described in (21a), then the innovation of restoring the original contiguity between adverb and verb can first be expected in principal clauses, and in fact such contiguity is now the norm in these clauses. That the innovation, however, is beginning to spread into subordinate clauses is demonstrated by (13) and (14) and the possibility of moving *direkt* in (11) and *helt* in (12) to the post-auxiliary position. Perhaps in the course of time Swedish will reach the more advanced stage of English, where the contiguity of a verb-modifying adverb and its verb has been fully restored in subordinate as well as in principal clauses.

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[4] Webster's Third New International Dictionary has an entry for this verb, which it classifies as obsolete or Scottish.

[5] Cf. also Ross' "Penthouse Principle" (1973 : 397), according to which more goes on upstairs (i.e. in principal clauses) than downstairs (i.e. in subordinate clauses), and Emonds' root and structure-preserving transformations, the former of which only, or chiefly, apply to principal clauses (Emonds 1976).

In the banning of the pre-auxiliary position for Swedish verb-modifying adverbs in principal clauses another factor also seems to have played an important role, namely the factor that can be assumed to have caused the same kind of ban for non-verb-modifiers like *alltid* and *aldrig*, e.g. in (4a) and (7a). A plausible explanation of this ban is that in the progressive declarative principal clauses the finite auxiliary has not remained in the position described in (21a), i.e. immediately before the main verb, but moved further to the position of second constituent in the clause, as in (26).

(26) a. Han *har* alltid varit snäll och lydig.
He has always been good and obedient.
b. Alltid *har* han varit snäll och lydig.
Always he has been good and obedient.
c. Martin *har* jag aldrig sett.
Martin I have never seen.
d. Till John *har* jag aldrig gett något.
To John I have never given anything.

This position is also taken by the finite verb, as in (27).

(27) a. Laura *kommer* alltid.
Laura always comes.
b. Alltid *kommer* du till mig med dina klagomål.
Always you come to me with your complaints.
c. Martin *ser* jag aldrig.
Martin I never see.
d. Till John *ger* jag aldrig något.
To John I never give anything.

This tendency for the finite auxiliary or verb to be the second constituent of a declarative principal clause is found in all Germanic languages with the exception of English (Cf. Rahkonen 1974:60 and Bynon 1977:156).

What we are now witnessing is a similar development in those Swedish subordinate clauses which most resemble principal clauses, namely those containing assertions, as in (4b).[6]

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[6] According to Wessén (1965 : 334), the systematic distinction between the word order of principal and subordinate clauses that is broken by this development did not become a regular feature of Swedish until the modern period. Therefore we can very well find occasional instances of post-auxiliary placement of adverbs in subordinate clauses in medieval texts, e.g. in the following extract from Patrikssagan (St. Patrick's tale) of the 13th century.

(i) … han … iäfuadhe storlica at han sculle *alre* väl koma the brona "he feared greatly that he would never get over that bridge" (S. Patriksagen, Samlingar utgivna av Svenska Fornskriftsällskapet, Part I, Stockholm 1844 : 19).

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TOWARD A CONTRASTIVE ANALYSIS OF TENSE AND ASPECT IN POLISH AND ENGLISH

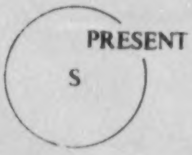
Oscar Swan

University of Pittsburgh

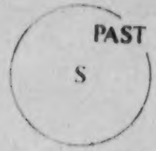
1. *Aspect and Tense.* The three main aspectual distinctions holding from language to language are those of completive, progressive, and generic action. The aspects are amenable to a localistic definition in terms of the notions "at"/"in" and "away from". Action located in or at a point along the time axis is progressive; action located away from a point is completive; action holding outside point reference is generic. The notion of tense preceeds from the notion of aspect by identifying the point of reference as the present moment. In this way, 'present' and 'progressive' become two names for, or ways of looking at, the same thing, while the notion 'away from' (completive) becomes split into 'before' (past) and 'after' (future). Diagrammatically, this differentiation may be represented as follows:

1) aspect → specified or nonspecified (generic)
2) specified → away from (completive) or at/in (progressive)
3) away from → before (past) or after (future)

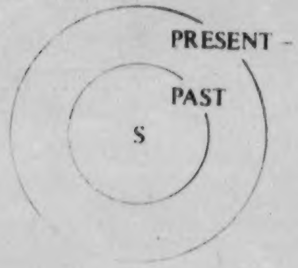
The tense-aspect systems of languages like English and Polish can be generated by allowing the four tense-aspect specifications (general, progressive, past, future) to occur either singly or in compounds with one another. Tense compounds are formed locatively, one tense embedding into another. For illustrative purposes, tense compounds can be represented with circle diagrams. The *present*, *past*, *present-past*, and *past-present* are illustrated below. The sign S represents the sentence, itself embedded in the tense matrix.



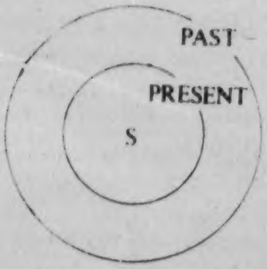
S: biorę, I am taking (action *at* the reference time-point)



S: wziąłem, I took (action *before* the reference time-point)



S: wziąłem, I have (just) taken (past action carried forward to the present reference point).



S: brałem, I was taking (present = progressive action placed in the past)

Tense compounds of up to three members can be found, for example, the *present-past-present* (progressive action placed in the past with present relevance), as in

I have been reading (for four hours)
Czytam (już cztery godziny).

The described generative mechanism provides a simple system for an initial comparison of the tense-aspect meanings and expressions of English and Polish. The most important tense-aspect meanings in English and Polish are the folowing:

present I am taking	biorę
general I (often) take	
present-past-present I have been taking	
past-present I was taking	brałem
past-general I (often) took	
past-past-present I had been taking	
past-past-general I had (often) taken	
present-past-general I have (often) taken	
general-past I have (already, at some time or another) taken	

future-present I will be taking	będę brał
future-general I will (often) take	
general-future I am going to take (sometime)	
future-past-present I will have been taking	—
past I took (once)	wziąłem
present-past I have (just) taken	
past-past I had taken	
future I will take (once)	wezmę
present-future I am about to take	
future-past I will have taken	—

The above meanings are the simple denotative tense-aspect meanings of English and Polish. The chart implies that, for example, the English expression *I have* (*just*) *taken* will normally be translated by the Polish *wziąłem* and that, conversely, Polish *wziąłem*, when used to express past action with present relevance, will be translated by English *I have* (*just*) *taken*. As is obvious from the juxtaposition of the two languages, English tends to be more formally explicit than Polish as to the underlying tense-aspect meaning. In addition, English can express in the verb certain meanings which in Polish can usually only be expressed by some kind of paraphrase, cf.

He will have left by four o'clock (future-past)
O czwartej go już nie będzie.

2. The main place where the English student learning Polish will be led astray by employing the above chart is in the expression of the simple past tense, where the imperfective (e.g., *bralem*) will often be used instead of the expected perfective (wziąłem). In this section we will examine reasons for this alternation.

2.1. The choice of the Polish perfective versus imperfective in the expression of the simple past tense seems to be determined by three factors, namely, 1) the semantic class of the verb (whether result, completive, telic, progressive, habitual, or generic); 2) whether the propositional information is old or new; 3) whether the given aspect form is expected (unmarked) or unexpected (marked).

2.2. Assuming that the proposition expresses new information (the unmarked case), we find that the perfective form is usual only when expressing the simple past of result verbs like *kupić* (buy). With telic verbs like *czytać* (read); the imperfective is usual. (Progressive, habitual, and generic verbs do not have simple, non-meaning altering perfectives, so they may be left out of present consideration). The following sentences illustrate unmarked uses:

kupiłem wczoraj książkę "I bought-perf. a book yesterday"
czytałem wczoraj książkę "I read-imperf. a book yesterday."

2.3. Still assuming that the proposition expresses new information, a formal distribution opposite the normal distribution will produce connotative, or marked, meanings.

2.3.1. The use of the imperfective of a result verb produces a connotative meaning of either intended but not completed, or of unusually complex action:

kupowałem wczoraj książkę I bought-imperf. (tried to buy, bought complexly) a book yesterday.

It is important to distinguish such uses from the simple past progressive expression, i.e., the same sentence in the meaning "I was buying a book yesterday (at a particular time)."

2.3.2. The use of the perfective of a telic verb produces a connotation of getting something done or out of the way:

przeczytałem wczoraj książkę I read-perf. (got read) a book yesterday.

It should be noted that such uses illustrate the Polish prefixed perfective in its classic use, that of stressing the completion of a potentially incomplete action.

2.4. When the verb is used to update old information (information mentioned recently enough to be relevant to the discourse), the perfective is expected with both result and telic verbs:

kupiłem wczoraj książkę I bought-perf. the book yesterday (as I said I would).
przeczytałem wczoraj książkę I read-perf. (finished reading) the book yesterday (as I said I would).

3. The Polish learner of English must learn to deal with the following peculiarities of the English *be+-ing* expression.

3.1. The English *be + -ing* expression is not usually used when a present progressive verb refers to an involuntary mental state, e.g., *want*:

John is eating a sandwich (present progressive)
John wants to leave (present progressive, verb of involunatary mental state.

3.2. When used with habitual and generic verbs, *be + -ing* conveys vividness or immediacy:

Where do you live? (unmarked)
Where are you living? (marked, conveys immediacy, short duration).
I hate him more and more (unmarked)
I am hating him more and more (marked, conveys vividness).

3.3. *Be* + *-ing* is marked in the generic aspect where it expresses excessive or inveterate activity:

John always dresses neatly (unmarked)
John is always dressing neatly (marked, conveys excessive tidiness on John's part).

3.4. *Be*+*-ing* occasionally "discovers" new meanings for adjectives, cf.
John is nice (unmarked)
John is being nice (marked, conveys insincerity on part of John).

The latter use is idiomatically conditioned, i.e., it is not open to all adjectives, but primarily to behavioral adjectives, cf.

**John is being hungry*.

4. In the present paper, we have outlined the major features of tense-aspect use in the English and Polish finite verb. We have seen that, as disparate as the languages seem to be on the formal level, for the most part they deal with the same semantic substance. This is true above all in regard to the simple denotative level of tense-aspect expression. Important semantic differences between English and Polish appear when either language's aspect forms are used out of normal context for the expression of subtle and essentially untranslatable shades of meaning.

From the present study it follows that when teaching the tense-aspect system of either language to speakers of the other, one should begin by matching denotative tense-aspect uses. Connotative uses, which are not easily matched from one language to the other, should be recognized for what they are and should be taught later.

WHAT DO WE NEED LEXICAL CONTRASTIVE STUDIES FOR?[1]

TOMASZ P. KRZESZOWSKI

University of Gdańsk

The most straightforward answer to the title question is "we need contrastive lexical studies because it is fun to do them". Assuming that such studies can be performed at all, even if nothing useful comes out of them, (which I hope is not the case), it is possible to begin our discussion of lexical contrastive studies from examining various kinds of comparisons which can be performed when one juxtaposes lexical materials in two languages, without immediately trying to evaluate theoretical or practical results of such comparisons. Only later it may become possible to decide what could be theoretically interesting and practically useful in conducting such studies. Adopting this strategy, we shall divide the present paper into three major parts. In the first part we shall delimit the area of lexicology. In the second part we shall outline possible areas of contrastive lexicology as art for art's sake, without pretending to exhaust the subject. In the third part we shall try to decide what is worthy of more detailed investigations, both for theoretical and practical reasons.

Let us start by recalling the well known fact that in the process of communication people use sentences in connected discourse, but when they learn a foreign language, their main concern is to learn words in order to be able to refer to things, ideas, events, qualities, and so on. Crudely speaking, lexicology is that branch of linguistics which deals with this particular aspect of language. In the American tradition of linguistics lexicology has never enjoyed popularity, chiefly due to the uncertain linguistic status of *word*. Word has always been considered as a notion which is notoriously difficult to define,

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[1] This paper was written in early 1976, but due to editorial reasons could not be published within the usual limits of time. The time lag between the date of its submission and publication explains the absence of references to some later publications. Nowakowski's article referred to as Nowakowski (1977) was then available in its manuscript form. Preston's distinction of labelling features in dictionaries reached me as "oral communication".

Following Nida's views on the concept of word (Nida 1946), Francis says "we shall find our definition of the word a good deal more complex than at first thought seems necessary" (Francis 1958:201). It would seem, however. that just as in the case of the sentence, which cannot be given a satisfactory one-sentence definition, but rather it must be defined in terms of a device (grammar) generating sentences in a particular language, the notion of the word cannot be defined without constructing a dictionary of that language. Thus sentences are objects *generated* by the grammar of a language, while words are objects *listed* in the dictionary to the left of each lexical entry. All the same, before contructing a dictionary the investigator must delimit the scope of his data in such a way as to conform to native speakers' intuitions (unfortunately very misleading!) about what constitutes a word in a given language, i.e. about what qualifies as a potential lexical item in the dictionary that he is constructing. Therefore, some tentative definition is necessary to ensure a certain degree of consistency in constructing lexical entries. It follows that the notion *the word* can be described from two points of view. From the point of view of a linguistic theory *the word* is a linguistic unit which is listed in the dictionary of a particular language as the first element of each lexical entry. From the diagnostic point of view, providing criteria for identifying words in texts (both written and spoken), it is possible to describe *the word* in a variety of ways. In the present paper we shall describe *the word* in the way which seems to provide the best grounds for making proper recognitions of words in contrast with other units of linguistic analysis. The definition which follows is a synthesis of the definitions formulated by Arnold (1973:30) and Lyons (1968:203): "a word is the smallest significant unit of a given language, which is internally stable (in terms of the order of component morphemes), but potentially mobile (permutable with other words in the same sentence)". This definition makes it possible to distinguish between the word and the phrase (not the smallest significant unit), the word and the morpheme (not positionally mobile within a word), as well as the word and the phoneme (not significant). In this way the definition isolates lexicology from syntax (phraseology), morphology and phonology. It is needless to say that all these areas are mutually interrelated and that in the actual analytic practive it is often difficult to make categorical decisions. In the subsequent sections of this paper we shall try to show that especially the border line between lexicology and syntax is almost impossible to draw in any adequate account of language. Nevertheless, as a basis for strategies of investigation, this diagnostic decription of the word will have to be accepted, especially in vew of the fact that a better one is not available.[2]

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[2] In those languages in which *words* cannot be easily isolated in texts the problem of separating lexicology from grammar is especially acute.

The crude definition of lexicology given above defines it as a study of words. Considering the definition of words as *significant* units of language, it is inevitable that what lexicology must be concerned with is, among other things, the *meaning* of words. Now, the study of the meaning of words is impossible without examining linguistic and extralinguistic *contexts* in which words appear and in which they assume various senses within the limits characterizing a particular word.

Therefore, any productive approach to the meaning of words must be through the contexts in which words appear.

The definition of the word given above allows to include among words not only compounds such as *blackboard* or *typewriter*, in which constituent morphemes cannot be permuted within a given sentence, but also set phrases (fixed expressions) of various degrees of fixedness, ranging from such non-motivated phraseological fusions as *red tape* (bureaucracy) or *kick the bucket* (die), which are equivalents of words, to highly motivated phraseological collocations such as *alarm clock* and *night-school*, all of which express certain integrated notions. Some of these expressions happen to have one-word equivalents in another language (cf. Polish biurokracja, budzik, etc.). All such combinations of linguistic units which also function as words (red, tape, night, school, alarm, clock, kick, the bucket) and which express fixed integrated notions naturally fall within the scope of lexicology and it would be useless and impractical to pretend that they do not (see also Nowakowski 1977).

However, if one accepts the view that lexicology has to deal with compounds and fixed expressions of the types exemplified above, one faces a formidable task of delimiting the upper bound of lexicology, separating it from syntax. The basic problem is to what extent constraints on collocations of particular lexical items in syntactic contructions are subject to listing in a dictionary and to what extent they are statable in terms of rules. This in turn is connected with a more general problem of what may be called 'precision' of grammars. Early transformational generative grammars, written in the framework provided by Chomsky's *Syntactic structures* (1957), were extremely crude in that they imposed no constraints on the co-occurrence of various content words (nouns, verbs, adjectives, adverbs) in syntactically well-formed preterminal strings. These models generated both semantically acceptable sentences such as "John admires sincerity" and semantically unacceptable "Sincerity admires John". However, right from the start Chomsky made the proviso that an adequate grammar should be endowed with means for eliminating such semantic anomalies. One way to do it was to subcategorize verbs and nouns in such a way as to allow only some verbs to occupy positions after abstract nouns functioning as subjects of these verbs, and only some verbs in positions before human nouns, etc. This led to the formulation of the theory of selection restricitions exponded in Chomsky 1965. The elimination of all possible semantic anomalies through the operation of selection restrictions requires the introduction of an appallingly large number of theoretical concepts called semantic markers. This fact is noted by Bolinger, who writes: "If we are to account for the fluent speaker's ability to recognize an anomaly — as well as an ambiguity — through the markers at his command, then the number is indeed legion." (Bolinger 1965:564). All the same there is no doubt that contextual features, strictly subcategorizing verbs in terms of syntactic categories with which verbs can co-occur in sentences, are syntactically relevant. However, neither contextual features nor markers (in whatever number) are helpful in accounting for ill-formedness of a large number of collocations such as *carry a grudge* as opposed to *bear a grudge* or *strong rain* as opposed to *heavy rain*, or *take hatred* as opposed to *take a liking*. On the other hand, as is claimed by McCawley, markers have no syntactic relevance at all, since "the matter of selectional restrictions should be totally separate from the base component and (...) the base component thus be a device which generates a class of deep structures without regard to whether the items in them violate any selectional restrictions. "(McCawley 1968:135). This claim leaves collocations totally outside the scope of the linguistic theory, since the selection of particular words in collocations must be decided on at the level of "deep structure" and lexical anomalies such as *take hatred* or *carry a grudge* are syntactically well-formed. The theory does not provide any framework for considering them as semantically ill-formed either, unless lists of collocations are systematically introduced into the theory at some prior (?) level of representation. This problem will be taken up in the third section of the present paper. Here I would like to claim that notwithstanding theoretical problems with finding a place for collocations in an overall account of language, they do fall within the scope of lexicology, constituting its upper-bound and being an area which shades into syntax in a non-discrete way.

Lexicology thus appears to be concerned with formal and semantic properties of the following phenomena: one-morpheme words, constituting the lower bound of lexicology (e.g. *table, man, dog. radio*, etc.), complex words (e.g. *engulf, writer, disagreeable*, etc.), compound words (e.g. *blackboard, armchair*), compound-complex words (e.g. *type-writer, radio-announcer*), phraseological fusions or idioms, i.e., non-motivated combinations of words which are semantically integrated (e.g. *red tape, kick the bucket*, phraseological unities, i.e., partially motivated combinations of words (e.g., *to show one's teeth, to wash one's dirty linen in public*), and phraseological collocations, i.e., combinations of words characterized by lexical valency but highly motivated from the semantic point of view (e.g. *bear a grudge, bear malice, take a liking*).

Both formal and semantic properties of these units can be the object of contrastive analysis across languages. We shall discuss some of these properties under the following headings: (1) one-morpheme words (simple words); (2)

word formation; (3) phraseological fusions, unities and collocations; (4) semantic relations; (5) emotive and stylistic charge.[3]

(1) A simple word is a word which consists of a single base with or without inflexions. A large number of simple words in English correspond to simple words in another language, at least in some of their senses, for example *dog — pies*, *bed — lóżko*, *room — pokój*, etc. In some cases a simple word in English corresponds to a polymorphemic word in Polish and vice versa, for exemple *handle — u-chwyt*, floor — *pod-loga*. Such comparative statements are theoretically uninteresting, though it is by no means obvious on what grounds particular words in one language should be matched with their equivalents in another language.

All types of words and their equivalents may exhibit various degrees of formal and semantic similarity. Lado distinguishes six possibilities: 1. similar in form and meaning (e.g. *map-mapa*, *nose — nos*, *pilot — pilot*, *son — syn*); 2. similar in form but different in meaning (e.g. *dog — dog*, *toast — toast*, *record — rekord*); 3. similar in meaning but different in form (e.g. *table — stół*, *tree — drzewo*, *chair — krzeslo*); 4. different in form and meaning (e.g. *public school — szkola prywatna*); 5. different in their type of construction (e.g. *put on — na-kładać*, *write out — wy-pisywać*, *call off — od-wolywać*); 6. similar in primary meaning but different in connotation (e.g. *bloody — krwawy*) (Cf. Lado (1955)). A more detailed discussion of these possibilities is given in Krzeszowski (1971:78ff).

(2) Word formation involves derivation by means of affixation, backformation, word-composition, shortening, acronymy and some minor types such as sound interchange, distinctive stress and sound imitation (see Arnold (1973:93ff)). The investigator faces a vast area here as lexical equivalents across languages may display a large range of differences with respect to particular means employed in the formation of words. No systematic correspondences seem to be in view, since a one-morpheme word in one language may correspond to a compound word in another language or a complex word may correspond to a simple word and so on, in all possible combinations. Below are some example of such correspondences:

English	Polish
simple word	*complex word*
seat	siedzenie
bitter	gorzki

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[3] Outside the scope of the present paper remain some further phenomena which could also be studied contrastively, for instance diachronic distinctions (archaisms, geographical distinctions (regionalisms). metaphorizations, as well as semanto-syntactic and morphophonological nets in what Nowakowski (1977) calls the LEXICON. See also footnote 5.

darn	cerować
moral	moralny

simple word	*compound word*
hedge	żywopłot
porcupine	jeżozwierz

complex word	*simple word*
rubber	guma
whiteness	biel
flight	lot
gift	dar
poster	afisz

compound word	*simple word*
rain-bow	tęcza
armchair	fotel
father-in-law	teść
man-of-war	okręt
hedge-hog	jeż
moon-calf	kretyn

compound word	*complex word*
telltale	plotkarz
sightseeing	zwiedzanie
book-keeping	księgowość
ear-ring	kolczyk
ash-tray	popielniczka
knee-cap	rzepka

complex word	*phrase*
percolator	maszynka do kawy
Christmas	Boże Narodzenie
ratter	człowiek (pies) łapiący szczury

complex word	*compound word*
foreigner	cudzoziemiec
Easter	Wielkanoc

Since formal comparisons of individual lexical items across languages do not seem to yield themselves to any significant generalizations, a contrastive analysis of word formation is probably better off it is based on some conceptual framework. Such an analysis could, for example, involve a comparison of means (affixes, etc.) employed in the derivation of nomina actionis, nomina agentis, nomina loci, of adjectives of intensity, inclination, possibility, ability, or of verbs of process, causation, instrument, and so on (Cf., for example, Sehnert and Sharwood-Smith 1974).

(3) Another area of investigation covers what we have called phraseological fusions, unities and collocations. The differences between the three kinds of units can be attributed mainly to varying degrees of idiomaticity, or, in other words, semantic motivation involved in the combination of words within particular units, with fusions being semantically non-motivated, unities being partially motivated and collocations being motivated.[4] Since discrete boundaries between the three types of phrases are difficult to draw, we shall discuss them jointly under the cover term 'phraseological units' (Cf. Ginzburg et al. 1966:100ff).

Phraseological units constitute a unit intermediate between a compound word and a free phrase (loose phrase) in that like compound words phraseological units are severely constrained with regard to the co-occurrence of their constituents but represent the same *syntactic* types as do loose phrases (cf. Arnold 1973:148ff). In many cases phraseological units are functionally and/or semantically equivalent to single words, which is another reason why they should be considered as the subject matter of lexicology rather than of syntax. Phraseological units may exhibit considerable differences across languages both with respect to lexical congruity as with respect to syntactic congruity. Below are some examples illustrating the lack of lexical congruity:

English	Polish
small hours	*wczesne* godziny 'early hours'
fountain pen	*wieczne* pióro 'eternal pen'
man and wife	*mąż* i żona 'husband and wife' archaic mąż=man
heads or tails	*orzeł* czy reszka 'eagle or tails'
heavy storm	*silna* burza 'strong storm'

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[4] Skorupka divides phraseological units into "związki frazeologiczne stałe, łączliwe i luźne". "Związki stałe" correspond to our phraseological fusions (idioms) and unities, "związki łączliwe" correspond to our collocations, and "związki luźne" correspond to what we chose to call free phrases (Skorupka 1967 : 6—7).

The lack of lexical congruity in those pairs of equivalent phraseological units resembles the lack of congruity of constituent words in compound words, e.g.:

scare*crow*	strach na *wróble* (sparrows)
wrist-watch	zegarek na rękę (hand)
night-school	szkoła wieczorowa (evening)

The following examples illustrate the lack of syntactic congruity of equivalent phraseological units:

English	Polish
N+N	Adj+N
maiden name	nazwisko panieńskie
N+N	N+N+genetive
brains trust	trust mózgów
N's+N	Adj+N
cat's paw	kocia łapa
VP+NP	V+Prep+NP
influence somebody	wpłynąć na kogoś
N+N	N+Adj
prize money	nagroda pieniężna

In the last example the modified noun in English corresponds to the modifying adjective in Polish.

In addition to comparisons of various syntactic patterns characterizing equivalent phraseological units across languages, it is also possible to examine and compare various *degrees of valency* of lexical items in compounds and phraseological units. Notice, for example, a higher degree of lexical stability in the English unit *calf love* than in its Polish equivalent 'cielęca miłość'. In Polish one also meets 'cielęce lata' (years), 'cielęcy rozum' (mind), 'cielęcy mózg' (brain), and 'cielęcy zachwyt' (delight).

(4) The next area of investigation embraces various types of semantic relations between lexical items and provides a convenient dimension for interlinguistic comparisons. Among others, the following types of semantic relations can be described and compared: (a) polysemy; (b) homonymy; (c) synonymity; (d) antynomity; (e) semantic fields. Let us look briefly at each of these types of relations.

(a) Polysemy. Most content words in everyday use in all natural languages have more than one sense. Any specification of senses of a word in any dictionary is a recognition of the polysemic character of that word. Any specification of various equivalents in L$_2$ of a lexical item in L$_1$ is not only a recognition of the polysemic character of words but also an exercise in lexical contrastive studies. In so far as bilingual dictionaries of necessity contain such specifications, the phenomenon of polysemy is among the most crucial ones in lexical contrastive studies. This is reflected in the fact that polysemous items constitute complicated networks of interconnections in any sizeable bilingual dictionary: for every polysemous lexical item in L_1 there exists a set of equivalent items in L_2, each such item having a set of equivalent items in L_1, etc. For example, the English lexical item *table* has the following twelve equivalent items in Polish: 1. stół; 2. towarzystwo przy stole, biesiadnicy; 3. płyta; 4. napis wyryty na kamiennej tablicy; ~ s prawa, ustawy; the ten ~s dziesięcioro przykazań; 5. płaskowyż; 6. karnisz; 7. płaszczyzna drogiego kamienia, klejnotu; 8. dłoń; 9. blaszka kostna; 10. tablica; tabela; spis; wykaz; 11. ~s tryktrak; 12. stół przewodniczącego parlamentu angielskiego (Stanisławski, J. (1968).

The Polish lexical item 'płyta', which is one of the equivalents of *table*, has the following equivalent items in English: 1. slab; plate; sheet; board; 2. record; 3. table-land; 4. wrest-block; wrest-plank (np. fortepianu); plaque (~pamiątkowa) (ibidem).

In turn, the English lexical item *board*, one of the equivalent of 'płyta' has eight equivalents in Polish, and so on.

To a large extent the same is true of

(b) homonymy, i.e., the relation between lexical items which exhibit fortuitous identity as in the case of the Polish zamek$_1$ 'castle', zamek$_2$ 'flock', zamek$_3$ ('halving' (arch.), and zamek$_4$, 'hinge ligament' (in mussels), where 'lock' has eight equivalents in Polish.

The presentation of lexical stocks in two languages in terms of such networds of interconnections is possible for a given finite set of lexical items in both languages, but it is a futile procedure if textual settings in which praticular lexical items appear are not considered. In the same sense paradigms of grammatical forms are meaningless and do not constitute a grammar of a language, if they are not seen as elements of structures into which they can be inserted.

(c) Synonyms. Like almost every notion in lexicology the term *synonym* (as well antonym) is vague. Roughly speaking, synonyms are the words different in phonic/graphic form but similar in connotational meaning and interchangeable at least in some contexts. This definition of synonyms makes use of the well known distinction between denotational and connotational meaning. It also makes an appeal to the notion of context. This is so because (1) it is impossible to talk about synonyms of individual words as such. Usually a particular *sense* of the word has its synonyms in one of the senses of another word. Moreover, it is impossible to match two words as synonyms if they are isolated from the contexts in which they can appear. For example the verb *to read* in the context *read dreams* is a synonym of *to interpret*, while in the context of *read one a lesson* it is a synonym of *give*. The matching of synonyms is thus basically no different from the matching of lexical equivalents across languages in so far as in both cases the selection of the appropriate sense, essential in choosing the appropriate synonym/equivalent is determined by the context in which the original word appears. (2) The similarity of the meaning involves only that part of the overall lexical meaning of a word which is called denotation in the well-known contradistinction to connotation, which is often different in synonymous pairs. For example, words like *live*, *dwell*, *reside* in their relevant senses are denotationally similar, but they differ with respect to their stylistic value, i.e., with respect to their connotations: live (neutral), dwell (poetic), reside (formal). (3) Synonyms are interchangeable only in some contexts, while in other contexts they are not only not interchangeable but also sometimes turn out to be antonymous. Such is the case with the words *exceptional* and *abnormal*. In the context of "the weather is————", the two words are interchangeable, while in the context "my son is————", the two words are near antyoms (cf. Quirk 1962: 120).

(d) Antonyms involve similar problems. As in the case of synonyms, one can only talk about a specific sense of a particular word being antonymous to a specific sense of another word. For example, the word *good* in most senses and in most contexts is antonymous to *bad* as in "a good girl" vs. "a bad girl", "*to be good at something*" vs. "to be *bad* at something", etc. However, *good* in the sense 'not less than a certain amount' as in "a *good* three miles" or "a *good* way" is not an antynom of *bad*, since in "a *bad* three miles" and "a *bad* way", *bad* is an antonym of *good* in its primary sense, i.e.; 'having the right quality'. The antonymous polarity in the second sense is in fact impossible to express by means of a single word, which, if it existed, would have to express the notion 'less than a certain amount'. The nearest candidate would be the word *little* as in "a little three miles" and "a little way".

Like synonyms, antonyms are interchangeable only in some contexts, which is evident in the previous example. This restriction can also be illustrated by the pair *young* vs. *old* as in "a young man" vs. "an old man" but not "a young hat" vs. "an old hat".

A contrastive study of synonyms and antonyms does not basically differ from such studies of other words, since in all cases the essential problems are connected with the selection of the appropriate senses on the basis of relevant contexts.

(e) Semantic fields provide grounds for yet another kind of grouping of words. Words which share a common concept are said to constitute semantic fields (cf. Trier 1931). The basis for grouping is always extralinguistic, since words are grouped in semantic fields because things which they refer to are connected in extralinguistic reality (Arnold 1973:206). Some examples of semantic fields are: colours, kinship terms, pleasant and unpleasant emotions, military ranks, educational terms, gastronomical terms, vehicles, being at a place, leaving, etc. Comparative studies of words constituting semantic fields in various languages constitute a rewarding activity and are so often performed that they are sometimes identified with lexical contrastive studies in general (see Duczmal 1979, Sehnert (MS)).

(5) The fifth type of comparisons involves stylistic-emotive charge of lexical items of the connotational component of their meaning. Synonyms or groups of words with similar denotational meaning usually differ with respect to their connotations. Stylistic charge of lexical items can be described in terms of features falling into keys (oratorical, deliberative, consultative, casual, intimate) and parameters superimposed upon keys (status, technicality, dignity, conformity) (Gleason 1965:385ff). Emotive charge can be described in terms of markedness of lexical items with respect to the features 'appreciative', 'depreciative' and 'neutral'.[8]

Contrastive analyses of synonyms and semantic fields, enhanced by the distinctions specified above are also successfully performed to the delight of investigators and readers. For Polish and English one such study has been conducted by Lewandowski (MS) and concerned the stylistic and emotive charge of the semantic field delimited by the concept 'female'.

After this brief overview of lexicology and possible contrastive procedures connected with it, let us now take a more critical look at some theoretical and practical issues.

Naturally enough, the theoretical status of lexical contrastive studies is strictly determined by the theoretical status of lexicology. By definition lexicology deals with those elements of language which cannot be generalized in terms of rules, constituting the domain of grammar. However, as has been repeatedly pointed out, no strict boundaries between lexicology and grammar (syntax) can be drawn. This fact creates a challenge for linguists, who so far have been unable to deal satisfactorily with the uncertain linguistic status of phraseological units, having syntactic properties of loose phrases but, like words, being much more severely constrained with respect to the selection and order of their constituents. Since these constraints are not dependent on the syntactic structure of the units in question, and since they are not systematic, like other unpredictable phenomena they are subject to listing and thus fall within the domain of lexicology.

All the same it is impossible to ignore the systematic and predictable character of some words as regards their inner structure. As Halle suggests, a linguistic theory should account for the native speaker's ability to distinguish between well-formed combinations of morphemes constituting words and ill-formed combinations of morphemes. Halle argues that "lexical insertion transformations take items from the dictionary rather than from the list of morphemes", while the rules of word-formation and the exception filter do not have to be fully activated in every speech act. "Instead it is possible to suppose that a large part of the dictionary is stored in the speaker's permanent memory and that the needs to involve the word-formation component only when he hears an unfamiliar word or uses a word freely invented". (Halle 1973:16). Being systematic in nature, word-formation codified in the form of rules generating words (cf. also Šaumyan's concept of 'word-generator' (Šaumyan 1968)) can be contrasted with analogous rules in another language, according to the principles which are not different from those that underlie syntactic comparisons. Such investigations may turn out to be theoretically rewarding. Pedagogical relevance of such studies should also be easy to envisage, even if one agrees with Halle that in a large number of cases learners may tend to treat derived lexical items as indivisible entities, unless they have some reasons to analyze their morphological structure.

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[8] Preston (MS) distinguishes as many as forty distinctive features characterizing psycho- and socio-linguistic contexts in which particular lexical items can be appropriately used. The relevance of these distinctions for contrastive lexical studies cannot be overestimated. Some implications of Preston's matrix for lexical contrastive studies will be discussed in a separate paper.

Also "vertical" and "horizontal" relations in Nowakowski's (1977) lexicon consisting of Weinreich lexical items may turn out to have a more systematic character than has been previously ascribed to them. However, as in the case of word-formation, any rules which might underlie such relations are probably dormant in language users and are activated to deal with new elements only in those special instances when the need to employ those rules arises.

The overlapping of grammar and lexicology is also evident in the description of lexical items themselves. A description of each lexical item, in addition to the specification of its phonological/graphological form, contains a specification of what may be called its grammatical value and its semantic value. The grammatical value of a lexical item contains its categorial and subcategorial specification expressed in terms of the same type of information that constitutes a grammatical description of a language. In so far as this type of information is grammatical it is also general in the sense that large sets of lexical items receive identical descriptions, for example as animate nouns, transitive verbs, factive verbs, relative adjectives, etc. On the other hand, semantic values may be unique, i.e. each lexical item has at least one feature which distinguishes it form all other lexical items within a given syntactic (sub)category and within a given semantic field. This explains why such words as *cat* and *dog*, or *hand* and *foot*, or *nose* and *mouth*, or *yellow* and *green*, or *Saturday* and *Sunday*, or *town* and *village*, or *walk* and *fly*, or *kick* and *stroke*, etc. are not synonyms, even if they belong to common semantic fields, sharing certain concepts. It inevitably follows that the number of semantic features required to account for differences in the meaning between particular lexical items constituting the lexicon must be at least as large as the number of lexical items themselves. Therefore, the theoretical value of these features is nil. This is not really surprising, since everything which is systematic in the lexicon must be somehow reflected in the grammar anyway. What remains is idiosyncratic and subject to listing. Moreover, as was pointed out earlier on, most features distinguishing specific lexical items within the dictionary are strictly connected with what is called our knowledge of the world, or more exactly with the factual information about the referents of lexical items. If this sort of knowledge is disregarded, it often happens that two lexical items, obviously denoting different objects, receive identical dictionary descriptions, as is the case with *cat* and *dog*, described as "a domesticated carnivore, bred in a number of varieties" and as a "domesticated carnivore, bred in a great number of varieties", respectively (*The random house dictionary of the English language*, College Edition 1968). On the other hand, if a distinction is made between the two kinds of species, it makes a direct appeal to our knowledge of the world, as is clearly reflected in the following definitions taken from *The world book encyclopedia dictionary*, edited by Clarence L. Barnhart: *cat*— a small, four-footed, flesh-eating mammal, often kept as a pet or for hunting rats and mice (...); *dog* — a domesticated mammal, related to wolves, foxes, and jackals, that is kept as a pet, for hunting, and for guarding property.

From the contrastive point of view the decomposition of lexical items into features in order to account for lexical equivalence across languages may be justified in theoretical contrastive analyses seeking an explicit account of interlinguistic lexical equivalence (cf. Di Pietro's analysis of *flesh* and *meat* and their equivalents in various languages (Di Pietro (1971:113ff)). However, it appears that adopting this procedure would result in the necessity to construct a special "theory" for each pair of equivalent items across languages. Each feature resulting from the decomposition would be a "theoretical" construct and would have little, if any, independent motivation. The practical utility of such "theories" would be negligible, since, as it follows from our earlier observations, the number of "theoretical" concepts would be at least as large as the number of lexical items. Therefore, in practically oriented contrastive lexical studies it is usually enough to juxtapose lexical items in one language with the appropriate lexical items in another language, according to equivalent senses, expressed in terms of synonymous words, properly qualified with regard to their connotations.[6]

A bilingual dictionary, which is a tangible outcome of practically oriented lexical contrastive studies, in its large bulk, consists of lexical items in one language and their equivalents in another language, usually selected on the basis of linguistic intuitions of the compilers. A more motivated procedure would match lexical items in two languages on the basis of detailed analyses of numerous equivalent texts written or spoken in both languages. Such an analysis would provide statistical grounds not only for matching equivalents but also for listing them in the order from the most frequent ones to the least frequent ones in all those numerous instances when a lexical item in one language has more than one equivalent in another language. In any case, no decomposition of lexical items into semantic features would be required to guarantee correct matching of equivalents.

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[6] This is not to say that there is no need of good intralinguistic definitions of lexical items, but such definitions are relevant only in monolingual dictionaries. Direct matching of lexical equivalents along the lines suggested here is quite good enough in bilingual dictionaries.

As was said earlier a large bulk of any bilingual dictionary is a juxtaposition of lexical equivalents across languages on the basis of the identity or at least similarity of referential meaning such as *cat — kot, table — stół, wireless — radio, walk — chodzić, yellow — żółty, small — mały*, often — *często, diet — sejm, primary school — szkoła podstawowa, M. A. thesis — praca magisterska, power-plant — elektrownia*, etc. Any person using a bilingual dictionary certainly expects to find this sort of information in the first place. Yet he is seldom happy if his dictionary does not go beyond listing lexical equivalents, even if, or perhaps especially if, more than one equivalent is given for a given item, as indeed is the case in the preponderant majority of cases. Most dictionary users inevitabily wish to be able to find information about the *use* of particular lexical items in both situational and linguistic contexts. They also welcome information about the possibilities of forming derived lexical items on the basis of those listed in the dictionary. A dictionary which fails to provide this sort of information is considered to be inferior to a dictionary in which such information can be found (cf. Tomaszczyk 1979). Here we arrive at a difficult problem: how much information about contexts in which particular lexical items appear should be included in a dictionary? It appears that there is no exaggeration involved in the answer that as much information about both linguistic and extralinguistic settings as is possible to contain in a dictionary should be contained. This is to say that, other things being equal, the quality of a dictionary is in proportion to its size seen as the volume of the material to the right of each lexical item. It also means that there is no such thing as the best dictionary, since a better (larger) one can always be complied and that the lexicographer's job is never done.

Having said this we can safely accept the view that all types of lexical contrastive studies, regardless of their questionable theoretical reputation, will be of value in compiling dictionaries as they will increase the informative part of the dictionary by just this sort of information which is so often sought by the learners: the contexts. It does not matter that some of these comparisons, for example the comparisons of thematic groups, involve encyclopedic rather than linguistic knowledge. This sort of knowledge must be included in any dictionary which is intended to help the learner to communicate in actual life situations. "Encyclopedic" descriptions of those lexical items in L_1' that have no conceptual equivalents in L_2' is often a necessity. Such words as *vicar* – (w kościele anglikańskim pastor (obsługujący parafię), *villadom* — ludzie zamieszkujący dzielnice willowe miasta, *thrasher* — ptak amerykański pokrewny przedrzeźniaczowi, *kilt* — rodzaj krótkiej spódniczki (część męskiego stroju narodowego Szkocji i Grecji) and many others have no equivalents in Polish and must be rendered as descriptions making a direct appeal to the reader's knowledge of the world. Such a situation often results in borrowings from one language to another.

Summing up, lexical contrastive studies appear to be a particularly complex area of utmost pedagogical importance with some thorny theoretical problems, which are still unsolved. Among these the notorious phenomenon of phraseological units awaits its Chomsky as in the contemporary theories of language these units do not fit anywhere. They are smuggled into dictionaries to the right of definienda (where they do not belong) with scraps of contexts dragged after them in a theoretically unmotivated way. This well reflects the 'neither fish nor fowl' linguistic status of phraseological units, which are not recognized either as lexical items (properly listed in the dictionary) of as grammatical structures (neatly generated by the rules of the grammar). The result is that the best grammar is incomplete without a dictionary and so is a dictionary without a grammar. But what is worse even dictionaries with grammars are incomplete, because so far neither grammars nor dictionaries have been able to cope adequately with linguistic contexts (leave alone extralinguistic settings) which seem to constitute the hard core of language in its everyday manifestations.

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THE SYNTAX OF ENGLISH AND FRENCH CAUSATIVE CONSTRUCTIONS*

André Hantson

University of Namur

1. Causative constructions have been dealt with extensively in the recent linguistic literature. But, to my knowledge, little attempt has been made to apply the insights gained there to the teaching of English grammar to advanced foreign students. In this paper I want to make such an attempt in the form of a contrastive analysis of French and English causative constructions. As this study is intended as a help to French-speaking students of English, rather than English-speaking students of French, the emphasis will be more on the peculiarities of English than those of French. As can be gathered from Kayne's (1975) monumental work, the syntax of French causative constructions is exceedingly complex, and the type of student I have in mind need not have explicit knowledge of all its intricacies in order to be able to understand the syntax of their English counterparts. Yet some familiarity with the structure of this part of the grammar of his mother-tongue strikes me as indispensible.

The theoretical framework of the exposition will on the whole be that of the so-called standard transformational theory. It is true that this theory has now been abandoned by most theoretical linguists because of its theoretical shortcomings. Yet no one has so far been able to replace it by a more attractive model. Quite on the contrary, its abandonment seems to have led to a chaos of rivalling theories which threatens the very survival of generative transformational grammar. In spite of its theoretical shortcomings the standard theory can still be considered to offer a pedagogically attractive framework for our discussion. As is well-known, its basic assumption is that a sentence has a deep structure, which determines its meaning, and a surface structure, which determines its phonetic form, the two being related by transformations that are not allowed to affect the meaning of the sentence. On the basis of this hypothesis it seems possible to come up with a coherent account of the similarities and differences between English and French causative constructions. Before going into these I should like to add that, as this is a study in applied, not theoretical linguistics, I have felt free to couch some explanations in relational rather than orthodox configurational terms when this has seemed to make for greater simplicity of exposition. Moreover I have attempted to achieve even greater simplicity by restricting the use of labelled bracketing to the indication of maximal structures. What I mean is this: in a sentence like *I want him to come tomorrow* the string *him to come tomorrow* can be considered as a clause (or (subordinate) sentence, symbol S), so that the sentence can be represented as: I want $[_S$ him to come tomorrow$]_S$. I have not felt it necessary to indicate that within this subclause *him* is an NP and *to come tomorrow* a VP. Let us next assume that *I want to come tomorrow* derives from *I want* $[_S$ *me to come tomorrow* $]_S$ through the deletion of the subject of the subclause and that a clause that has lost its subject cannot be considered to be a clause any longer.[1] Then we can represent the surface structure of *I want to come tomorrow* as *I want* $[_{VP}$ *to come tomorrow* $]_{VP}$.

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2. Let us now turn to the topic under discussion and start by considering the following (nearly) synonymous pair of French sentences:

(1) Elle a fait (en sorte) qu'il danse.
(2) Elle l'a fait danser.

Whereas in (1) *il* functions as the subject of *danser*, the corresponding pronoun *le* is found as object in (2). Yet in (2), just as in (1), *le* must be considered as the semantic subject of *danser*. In the rest of this paper I shall not be concerned with finite clauses dependent on *faire*. Rather I shall concentrate on the infinitive construction and contrast it with the various English non-finite constructions that can be used to express causation. So, one or two words may be said about it here. Native speakers of French prefer the construction with *en sorte*, the one without it seeming strange, though perhaps not unacceptable. Conversely, sentences like

(3) Le retour du président a fait que la situation est redevenue normale.

which, unlike (1) (which contains a subjunctive, cf. *Elle a fait en sorte que nous*

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[1] This is a pedagogical over-simplification that is justified, I think, as far as the constructions under discussion here are concerned. It stands to reason that imperatives and certain types of relative clauses should be considered to have sentential status, even in surface structure, in spite of having lost their subject.

dansions), have an indicative in the subclause, sound quite normal but express result rather than causation, and can be translated as:

(4) The return of the president has resulted in the situation becoming normal again.

As for *Elle a fait en sorte qu'il danse*, it is worth adding that this sentence is not completely synonymous with *Elle l'a fait danser* in that the former invariably refers to indirect causation whereas the latter can express either direct or indirect causation.

3. Before leaving the finite *faire* construction it is important to point out that in both the finite and the nonfinite clause the pronoun *il/le* has the same function, which, simplifying a great deal, may be referred to as the semantic or deep structure function. The sentence *Elle l'a fait danser* will therefore be derived from a deep structure something like

(5) Elle a fait [il danser]

where *il danser* is a clause functioning as the direct object of *faire*. English has several equivalents of *Elle l'a fait danser*. We shall consider the following:

(7) ??She caused him to dance. (t)
(7) She got him to dance.(t)
(8) She made him dance.(t)
(9) (?)She had him dance.(t)

The bulk of this paper will be devoted to a discussion of the syntactic characteristics of these four English causative constructions and their French counterpart (5). More specifically, I shall concentrate on the behaviour of these constructions under main-clause and sub-clause passivization and, as far as the first type of passivization is concerned, the related problem of clause union, i.e. the conversion of a deep structure complex sentence into a surface structure simple sentence (cf. sections 4 and 5). Next I shall deal with the following related topics: subject and object deletion in French clauses embedded under *faire* (section 6); *get*, *have*, and *cause*+ing-clause (section 7); infinitive clauses functioning as the object of *laisser* and *let* (section 8) the *see to it that* construction and its French counterpart (section 9).

Before going into these syntactic problems it is worthwhile to have a look at the SEMANTIC AND STYLISTIC DIFFERENCES between them. The most current constructions in colloquial English are those with *make* and *get*. *Make* clearly refers to compulsion, whereas the meaning of *get* seems to be closer to that of *persuade* than to that of *compel*, even though its syntactic behaviour (like that of *make*) is different from that of either verb (see below). In the *have* sentence the reference would seem to be to arrangement or result, the sentence being roughly paraphrasable as: *She arranged for him to dance, the result of her intervention was that he danced*. As for *cause*, this is a typically formal verb with a very general meaning.[2] It is most unlikely to occur in an informal sentence like *She caused him to dance*, which I have only used for ease of exposition. A typical example with *cause* would be: *Raising the temperature of liquid compounds causes them to decompose into their elements* (quoted by Van Ek (1966:41). If *cause* does occur in an everyday context, it would appear to express indirect, often unintentional, causation, as in *Her continuous nagging caused her husband to start an affair with his secretary* (t). But the verb is really typical of academic, scientific, technical English, where it expresses a direct or indirect causal relation between two phenomena.

In the linguistic literature the *cause*+infinitive clause construction is often found illustrated in colloquial-looking sentences like (6) *She caused him to dance*. It is important to warn foreign students of English syntax that many native speakers find such sentences unacceptable. As this is a very difficult area for non-natives, I have thought it indispensable to have my self-made instances checked by native speakers. Some have been checked by one or two native speakers only, but the majority have been submitted to as many as 18 informants.[3] The latter type of sentences has been marked (t). The grammaticality judgments given in the text represent 'averages' of the informants' reactions, there often having been a considerable amount of variation.

4. Let us now concentrate on the syntax of English *cause, get, make* and *have* sentences and French *faire* sentences.

In each of the four sentences marked (6)—(9), the causative verb has an infinitive clause as its object. Their deep structures can be represented as follows:

(10) She caused $[_S$ him to dance $]_S$

(11) She got $[_S$ him to dance $]_S$

(12) She made $[_S$ him to dance $]_S$

(13) She had $[_S$ him to dance $]_S$

It will be seen that the French sentence *Elle l'a fait danser* and the English sentences (6) to (9) have the same deep structure, i.e. roughly, the same semantic structure, but their surface structures are entirely different. One difference is that in the English sentences surface structure has the same word order as deep structure, whereas in the French sentence the pronoun *il* is moved in front of *faire* and acquires the object form. I shall come to this problem presently, but before doing so I want to have a closer look at the English sentences. First it will be noticed that I have represented the subclause as having *to* in all cases. This *to* is kept in surface structure after *cause* and *get* but deleted after *make* and *have*. Next let us check how these sentences behave under PASSIVISATION OF THE MAIN-CLAUSE.

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[2] See also M. Shibatani (1976 : 30 - 38) and McCawley (1976 : 119—120).

[3] I want to thank my colleague Peter Kelly, who, apart from acting as an informant himself, obliged me by sending lists of test-sentences to several of his friends in the U.K.

(14) *?She was caused to dance.(t)
(15) He was made to dance. (t) (*to* kept if *make* is passivised)
(16) *He was got to dance.(t)
(17) *He was had (to) dance. (t)

We see that passivisation is quite normal with *make* and totally impossible with *have*. With *get* and *cause* it seems to be virtually unacceptable. How is this difference in behaviour with regard to main clause passivisation to be accounted for? Notice first of all that the deep structures under (10—13) cannot be the structures to which the passive transformation applies. One of the things that the passive transformation does is change the direct object of the sentence into the subject. If we assume, correctly I think, that the clause *him to dance* is the deep structure (=semantic) object of the causative verb, then passivisation applied to this deep structure would yield:

(18) *Him to dance was $\left\{\begin{array}{l}\text{caused}\\ \text{got}\\ \text{made}\\ \text{had}\end{array}\right\}$

All of these sentences are, of course, totally ungrammatical. From the fact that *he* functions as the subject of the passive sentence *He was made to dance* it can be inferred that prior to passivisation the pronoun *him*, which in deep structure functions as the subject of *to dance*, must have been changed into the object of *make*. Let us call this transformation *subject-to-object raising*. This transformation, then, promotes the subject of a nonfinite subclause to the object of its main clause. The structure resulting from it can be represented as follows:

(19) She made him $[_{\text{VP}}$ dance $]_{\text{VP}}$

We now relabel the brackets as VP because *dance* is no longer a clause, having no subject. So subject-to-object raising has resulted in an underlyingly complex sentence surfacing as a simple sentence. To this structure the passive transformation can now apply, yielding: *He was made to dance*. From the fact that the sentence **He was had* (*to*) *dance* is ungrammatical, it can be inferred that in this case the pronoun *him* does not undergo subject-to-object raising but remains the subject of the infinitive, even in surface structure. As regards the sentences with *get* and *cause* passivisation seems to be most unusal, although grammar books do mention *cause*, as a verb that is construed with the so-called nominative+infinitive.[4] It must however be added that formal sentences like (?)*Liquid compounds may be caused to decompose into their elements* (t) sound a good deal more natural, so that the very low degree of acceptability of *?*He was caused to dance* may be a matter of register rather than grammar. If in a sentence like *She had him dance him* is to be considered the subject even in surface structure, then the question arises why the pronoun is in the object rather than in the subject form. Why, in other words, do we not have **She had he dance*? The easiest way, it seems to me, to account for the object form of the pronoun is to assume that English, unlike French, German and many other languages, increasingly tends to treat the object form of pronouns as the unmarked, neutral form, requiring a special transformation to account for the subject form, which tends to be more and more restricted to the function of subject of a finite verb.[5]

Let us now come back to the French sentence *Elle l'a fait danser* (=(2)). Also this sentence contains a pronounw hose case needs accounting for: *le*. As a first approximation it might reasonably be supposed that here, too, we have an instance of subject-to-object raising, yielding:

(20) Elle a fait le $[_{VP}$ danser $]_{VP}$

The unstressed pronoun *le* would then be moved in front of the finite verb *a fait* by the same rule as is needed for other unstressed pronominal objects (e.g. *Il l'a vu* from **Il a vu le*, as contrasted with *Il a vu Jean*). But notice that if we replace *le* in *Elle l'a fait danser* by *Jean*, the correct sentence is not **Elle a fait Jean danser*, as we would be led to expect, but rather: *Elle a fait danser Jean*. So if we were to apply subject-to-object raising in French, changing the subject of the infinitive clause into the object of the main clause, we would have to add some sort of inversion rule which inserts the infinitive

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[4] Zandvoort (1965 : 16) and Leonhardi and Welsh (1968 : 51).

[5] It would take us too far afield to go into this matter here. Suffice it to refer to forms like *What, me do a thing like that!*, *He is taller than me*, to indicate that English, unlike such other Germanic languages as German and Dutch, can use the object form for the subject provided it is not followed by a finite verb. The situation in French is rather more complex in that French uses emphatic pronouns, which are unmarked for case. Conversely, it is most implausible that all uses of the object form with subject function in English nonfinite clauses should be interpretable as emphatic uses of the pronoun. One case which could not be interpreted that way is the use of the form as the subject of a gerund, cf. *I can't understand him doing a thing like that.*

danser between the verb *faire* and its putative object *Jean*. But this is not the only complication. Matters get much worse in the event of the infinitive being a transitive verb. Let us consider the following deep structures:

(21) She $\left\{\begin{array}{l}\text{got}\\ \text{made}\end{array}\right\}$ $[_{S}$ John to read that novel $]_{S}$

(22) Elle a fait $[_{S}$ Jean lire ce roman $]_{S}$

In English there is no problem whatever: we get exactly the same thing as with an intransitive infinitive: there is subject-to-object raising with *make*, but not (normally) with *get*, which explains why we can have *John was made to read that novel*, but not **?John was got to read novel*. In French, however, the picture is an entirely different one. Here the deep structure must be transformed into:

(23) Elle a fait lire ce roman à Jean.

Jean is once again found to be separated from *faire* by the infinitive group *lire ce roman*, a fact which might be accounted for by the inversion transformation alluded to above. But, in addition, it is now in the indirect object form. So the subject of the infinitive appears to be promoted either to the direct or the indirect object of the main clause, depending on whether the infinitive is transitive or intransitive. This fact can be accounted for by setting up a *faire*-attraction transformation, which takes the verb-phrase out of the subclause and puts it after the main clause verb *faire*. If the subclause contains an intransitive verb like *danser*, this gives:

(24) Elle a fait danser $[_{NP}$ Jean $]_{NP}$

All that is left of the original object clause of *faire* is its former subject *Jean*- so that we can now relabel the brackets as NP. In other words, the original subject of the subclause *Jean danser* has become the object of *faire danser*. So we see that with an intransitive subclause *faire*-attraction has the same result as subject-to-object raising (i.e. it promotes the deep structure subject of the subclause to the object of the main clause, thereby changing the deep structure compound sentence into a surface structure simple sentence). But in addition it produces the correct word order and is therefore preferable to subject-to-object raising.

With a transitive verb like *lire* the derivation is more complicated. *Faire*-attraction yields:

(25) Elle a fait lire ce roman $[_{NP}$ Jean $]_{NP}$

All that remains of the subclause is again its former subject *Jean*, which we would again expect to take over the function of the subclause and become the direct object of the main clause. But this is impossible for the very simple reason that, as a result of *faire*-attraction, the main clause already has a direct object, viz. *ce roman*. So *Jean* becomes the next best thing, viz. the indirect object, which necessitates *à*-insertion. If the indirect object had been an unstressed pronoun a further transformation would have moved the indirect object in front of the finite verb, giving *Elle lui a fait lire ce roman*.

That *ce roman* must be regarded as the direct object of the main clause is shown by pronominalization, which yields (26), with *le* cliticizing in front of the verb of the main clause.

(26) Elle le lui a fait lire.

So in both (2) *Elle l'a fait danser* and (26) the surface structure direct object of the main clause can be looked upon as deriving from what is a subclause constituent in deep structure. In this respect French is similar to English. The two languages differ in that, as regards English, the subclause constituent under focus is always the subject, whereas in French it can be either the subject or the object, depending on whether the sentence is intransitive or transitive. But this is not the only difference. We have just seen that in English passivisation of the main clause is possible with some of the causative verbs (quite normally with *make*, marginally with *cause* and perhaps, even more marginally, with *get*) and impossible with *have*. By contrast, French *faire* never tolerates this sort of passivisation, cf. **Il a été fait danser*, **Ce roman a été fait lire*. It may, however, be worth adding that in 17-th century French sentences such as *Il fut fait venir* were apparently acceptable to some people.[6]

5. Let us suppose next that instead of $[_{s}$ *Jean lire ce roman* $]_{s}$, as was the case in (22), we have $[_{s}$ *son amant tuer son mari* $]_{s}$ as the object of *faire*, as in:

(27) Elle a fait $[_{s}$ son amant tuer son mari $]_{s}$

The application of *faire*-attraction, followed by *à*-insertion before the former deep structure subject of the subclause, yields: **Elle a fait tuer son mari à son amant*. But this is an ungrammatical sentence. Instead, we should have:

(28) Elle a fait tuer son mari par son amant.

This time the sentence contains an agent rather than an indirect object. Agents, of course, are associated with passive sentences. So let us assume that the SUBCLAUSE has undergone PASSIVISATION. Obviously, this is not the usual sort of passivisation we would expect a clause to undergo: the verb *tuer* is still in the active voice and it is far from clear that the object (*son mari*) has become subject. More precisely, only one of the three operations which Chomsky (1967) refers to as constituting the passive transformation seems to have taken place. Applied to the sentence *The enemy destroyed the city*, these three operations are:

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[6] Cr. the following quotation from Grevisse (1969 : 1066): "Le tour passif *il fut fait mourir, il fut fait venir*, qui a essayé, au XVIIe siécle, de s'introduire, a été condammé par Vaugelas".

a) *agent-postposing*, which changes the subject into an agent, giving: **-destroyed the city by the enemy*;

b) *subject-preposing*, which changes the object into the subject, giving: **The city destroyed by the enemy*;

c) *passivisation of the verb*, yielding, finally: *The city was destroyed by the enemy.*

To put a sentence into the passive all three of these operations are required, but, as Chomsky points out, something analogous to sentence passivisation can be observed to happen with English verbal noun groups. Thus a structure like

(29) The enemy's destruction of the city.

can have its subjective genitive replaced by an agent, thereby becoming

(30) The destruction of the city by the enemy.

Contrary to the sentence **destroyed the city by the enemy* this string is quite acceptable. So is the sequence obtained by allowing the objective genitive to take the place of the subjective genitive, as in

(31) The city's destruction by the enemy (vs *The city destroyed by the enemy).

But of course it is impossible for the verbal noun *destruction* to be put into the passive voice, a step which was found to be compulsory with the verb *destroy*. How do these facts concerning the (partial) passivisability of verbal noun groups relate to the construction under discussion, viz. *Elle a fait tuer son mari par son amant*? The crucial fact is that infinitives may be looked upon as a special type of verbal nouns that is intermediate between ordinary verbal nouns like *destruction* and finite verbs; they are more verbal than verbal nouns of the *destruction* type but less so than finite verbs. This explains why it is possible for infinitive groups to be either partially or wholly passivised. In the French construction under consideration there may be assumed to be only partial passivisation, whereby the subject becomes the agent without either the object undergoing subject-preposing or the infinitive being put into the passive voice. This partial passivisation yields:

(32) Elle a fait $[_S$ tuer son mari par son amant $]_S$

At first sight it looks as if sentences of this type remain compound even in surface structure. But there is at least one bit of evidence against this view: pronominalisation, which requires the former object of *tuer* to cliticize in front of the verb of the main clause, cf. *Elle l'a fait tuer par son amant*. This would seem to indicate that also passive infinitive clauses under *faire* undergo VP raising, resulting in clause-union. Seeing that *le* may be regarded as the object of the main clause, we might again expect main clause passivisation to be possible. But as was the case with *Elle l'a fait danser* (with no passivisation in the subclause) passivisation of a main clause containing causative *faire* is again impossible, cf. **Il a été fait tuer par cet homme* (*par sa femme*), where *par cet homme* and *par sa femme* are the agents belonging to *tuer* and *fait* or (*fait tuer?*), respectively.

Let us now have a lock at the English equivalents of (29), viz:

(33) ?She caused her lover to kill her husband. (t)
She got her lover to kill her husband. (t)
She made her lover kill her husband. (t)
((?)) She had her lover kill her husband. (t)

In French (partial) passivisation of the subclause has been seen to be obligatory with an infinitive like *tuer*. In the English sentences under (33) there is obviously no passivisation. But is it possible? We now want to check this for each of the four causative verbs under discussion. As regards *cause*, a sentence like *?She caused her husband to be killed by her lover* (t) seems to be doubtful. But, as was the case with the corresponding active sentence, this unacceptability may well be a matter of register rather than grammar. Anyway, the following sentence, which is meant as an example, appears to be acceptable.

(34) Subject-raising causes the S-node to be deleted. (t)

Now the question arises whether *the S-node* in (34) is to be considered as the subject of the infinitive or the object of *cause* in surface structure. Putting it differently, does subject-raising take place if the clause under *cause* has been passivised, so that the main clause, too, can undergo passivisation? No straightforward answer can be given, seeing that such sentences as (35), though admittedly very clumsy, cannot be absolutely ruled out.

(35) ?The S-node may be caused to be deleted by a variety of transformations: subject-raising, verb-raising, equi-NP delection, indefinite NP delection, etc. (t)

As for the *get* construction, passivisation of the subclause yields:

(36) She got $[_S$ her husband to be killed by her lover$]_S$

This does not sound like a grammatical sentence but it can easily be made so by deleting *to be*, which yields: *She got her husband killed by her lover*. In fact *be*-deletion is quite a current phenomenon in English and French nonfinite clauses, as is apparent from: *I consider that man (to be) an honest man*; *l'homme que je considêre (ètre) un homme honnête*. This time, however, the ungrammaticality of **Her husband was got killed* (t) shows passivisation of the main clause to be impossible. Correspondingly, *her husband* must be considered as the subject of the nonfinite clause even in surface structure. The same phenomenon can be observed with the causative verb *have*. Here, too, passivisation of the subclause yields an ungrammatical sentence (**She had her husband be killed* (t)), which is again made grammatical by *be*-deletion (*She had her husband killed*). But again passivisation of the main clause verb (i.e. *have*) is excluded, as shown by the ungrammaticality of **Her husband was had killed* (t).

Let us finally consider the *make* instances. Passivisation of the infinitive clause yields:

(37) She made $[_S$her husband be killed by her lover$]_S$

But this time passivisation leads to an ungrammatical sentence, no matter whether it is followed by *be*-deletion or not: **She made her husband be killed* (t) and **She made her husband killed* (t) are equally ungrammatical. Indeed, sentences exemplifying the *make*+accusative+past participle pattern are nearly always ungrammatical. But there are a few verbs, including *understand*, *know* and *fear*, with which it is quite current. Thus the following sentences represent normal usage:

(38) He made his views known/understood.
(39) He made his name feared. (t)

According to Van Ek (1966:120), whose inventory is an invaluable source of information for a student of English nonfinite object clauses, the *make*+accusative+past participle construction "is limited to collocations denoting the exercise and recognition of influence in the widest sense". In his corpus the participle *felt* occurs five times, *heard* twice, *respected* once and *understood* and *valued* also once. As was the case with *have* and *get*, double passivisation (i.e. of both subclause and main clause) is impossible, cf **His views were made understood* (t) and **His name was made feared* (t). It is true that *His views were made known* is grammatical, but *known* must be looked upon here as an adjectival rather than a verbal form, as is evident from a comparison of *His* *views were made known TO all his friends* (t) and **His views were made known BY all his friends* (t) (where *by* is an agent belonging to *known*, not *made*). So it would seem that subject-to-object raising is impossible in the string *make* $[_s$NP+past participle$]_s$. Interestingly, this may be taken to be part of a quite general constraint on main clause passivisation (and hence subject-to-object raising) in strings of the type:

$$\text{NP+V}_{\left[\begin{array}{l}\text{+plain infinitive}\\ \text{complement}\end{array}\right]} + [_s\text{NP+past participle}]_s$$

(where the past participle results from passivisation of a plain infinitive, followed by obligatory *be*-deletion).

Thus we have:

(40) a. I saw them blow up the bridge.
  b. She heard them call her name just once.
(41) a. I saw the bridge blown up.
  b. She heard her name called just once.
(42) a. They were seen to blow up the bridge.
  b. They were heard to call her name just once.

but not:

(43) a. *The bridge was seen blown up.
  b. *Her name was heard called just once.

This constraint does not seem to apply if the past participle clause results from the optional delection of *to+be* (as contrasted with just *be*, which may be assumed to occur in the passive transform of a plain infinitive clause), cf:

(44) He was reported/believed (to be) killed.

However, if we take the view that subject-raising is impossible in the string *make* $[_s$NP+past participle$]_s$ we are in trouble as regards the derivation of

(45) I made myself understood.

This sentence may be taken to derive from

(46) I made $[_s$people understand me$]_s$

Passive+*be*-deletion applied to this underlying structure give

(47) I made $[_s$me understood$]_s$

But this is not a grammatical sentence. Instead of *me* we need *myself*. To account for the occurrence of the reflexive pronoun we must regard *myself* as the object of the main clause, which shows that subject-raising is sometimes possible from a past participle clause embedded under *make*. One way of getting out of this dilemna, which was suggested to me by W. Winter, would be to consider *understood* in *I made myself understood* as not derivable from an active infinitive. This would, however, prevent us from setting up a systematic connection between this English sentence and its French counterpart *Je me suis fait comprendre*. On the other hand, the test that we have just applied to *known* does point to *understood* being an adjective, cf. *Did I make myself understood TO all of you*? It is true that (?) *Did I make myself understood BY all of you* is also marginally possible, but the important point is that the *to* construction, unlike the *by* form, seems to be associated with a specialised (adjectival) meaning: it is typically used in connection with instructions. But if *understood* is an adjective we may well wonder why **His views were made understood* (t) is ungrammatical, whereas *His views were made known* (t) is acceptable.

There is one more causative verb that can occasionally have a past participle clause as its object which I have not dealt with so far. I mean the verb *see* in sentences like the following:

(48) I will see her avenged. (quoted by Zandvoort (1965:50))
(49) He named twelve executors to see his wishes carried out. (quoted by Scheurweghs (1959:169))
(50) They sent their children to school to see them educated. (idem)

However, as was the case with *make*, the construction appears to be possible with a very limited number of verbs only. Thus the following sentences are virtually unacceptable.

(51) *?I shall see that suit cleaned next week. (t)
(52) *?We should see our house painted. (t)

At the moment I am unable to put forward any suggestions as to the nature of the semantic constraints on the use of past participle clauses as the object of the causative verb *see*. Whatever these may turn out to be, it is worth emphasizing that this construction can only very occasionally be used instead of the *have/get*+past participle clause or the *see* (*to it*) *that* construction (see below under 9.).

Two further remarks about this causative *see* are in order: (1) it differs from *have* and *get* in that the object clause cannot occur in the active, cf. **They sent their children to that school to see excellent teachers educate them* (t); (2) it is like *have* and *get* in not tolerating passivisation of the main clause, cf. **She was seen avenged*.

To sum up: we have seen that sub-clause passivisation is possible in English with clauses dependent on *get* and *have*, provided passivisation is followed by *be*-deletion. As regards infinitive clauses functioning as the object of the verb *cause*, passivisation seems to be quite possible in formal, academic English, but virtually impossible in colloquial English. It is obligatory with *see*, which, like *get* and *have*, requires *be*-deletion. On the other hand it is as a general rule impossible with infinitive complements of the verb *make*, although there are a handful of verbs, which, when occurring in the subclause, do allow it. When passivisation takes place in English subclauses dependent on one of the causative verbs, it is full passivisation involving not only agent postposing but also subject preposing and passivisation of the verb itself. In this respect English causative constructions contrast sharply with the French *faire* construction, where the infinitive cannot be put into the passive voice. Thus it is impossible in English to say **I caused/got/had/made that man (to) kill by John*, whereas in French it is just as impossible to say **Elle a fait (être) abattu son mari par son amant*. It may be worth pointing out that partial passivisation is not unknown with English nonfinite verbs either: we probably have it in *You need your toe looking at by a chiropodist* (quoted by Ryadford (1977:59)). But with the causative verbs under study this type of construction is totally impossible.

In French the active and the (partly) passive forms can hardly ever be regarded as free alternatives, mostly only one being possible in a given context. By contrast, English nearly always has the choice between an active and a (fully) passive subclause, that choice being, as a rule, a matter of style rather than grammatical constraints.

6. We have noticed that in English the agent in a passive sentence is often omitted. This is of course also frequently the case in French syntences. This explains why we may come across such homonymous pairs of sentences as

(53) Il a fait chanter la chanson.
(54) Il a fait chanter les garçons.

In (53) an agent like *par les garçons* may be said to be understood, whereas in (54) there is no agent understood but perhaps an indefinite object like *quelque chose*. If this view is taken it will be clear that this indefinite object needs deleting prior to the transformation that changes the subject of a transitive infinitive clause into an indirect object. If this were not the case we would derive **Il a fait chanter aux garçons*. After the deletion of its indefinite object *chanter* behaves as if it were an intransitive verb, thus enabling its subject to become the direct object of the main clause.

Agent deletion and indefinite object deletion are apt to give rise to ambiquous sentences of the type

(55) Je ferai manger vos chèvres.
(56) Il a fait brûler le papier lentement.

which, respectively, derive either from

(57) a. Je ferai $[_s$vos chèvres manger quelque chose$]_s$

b. Il a fait $[_s$le papier brûler lentement$]_s$

or

(58) a. Je ferai $[_s$(les lions) manger vos chèvres$]_s$

b. Il a fait $[_s$quelqu'un brûler le papier lentement$]_s$

If the subject of the subclauses were not deleted as either indefinite or predictable from the context they would surface as agents in sentences like:

(59) a. (Si vous ne suivez pas mes ordres,) je ferai manger vos chèvres par mes lions.
b. Il a fait brûler le papier par son secrétaire.

The reason why such ambiguities are possible in French is that the infinitive clause under *faire* is only partly passivised: its subject becomes the agent, but the infinitive is not put into the passive voice. If the agent is subsequently deleted, surface structure no longer contains any indication as to whether passivisation has taken place or not. In English ambiguities of this type are ruled out because subclause passivisation requires the infinitive to be put into the passive voice. Compare the above French instances with the following:

(60) a. I'll make your goats eat.
b. I'll have your goats eaten (by my lions, if you don't obey my orders).
(61) a. I'll make the paper burn slowly.
b. I had the paper burnt slowly.

In *Je ferai manger vos chèvres*, in the sense of *I'll have your goats eaten*, the infinitive no longer has a subject. In this particular sentence the absence of a subject could, of course, be looked upon as the result of partial passivisation, involving agent postposing but not subject preposing. But notice that also intransitive clauses embedded under *faire* can have their subject deleted, as for instance in *Cela fait rire*, from

(62) Cela fait $[_s$on rire$]_s$

It is important to emphasize that deletion is impossible in the corresponding sentence in English, where we will have something like *It makes you/one/people laugh*. If it is felt that no subject should be expressed a different construction is required, for instance one containing a derived verbal noun or a nominal gerund functioning as the object of *cause*, as in *This may cause some laughter/giggling*. It is worth adding that this difference between French and English as regards the delection of the notional subject of the infinitive is also found with other verbs. Compare:

(63) a. Cela (nous) obligera à étudier ce problème.
b. This will $\left\{\begin{array}{l}\text{oblige}\\ \text{force}\\ \text{compel}\end{array}\right\}$ us to study that problem.
(64) a. Cela (nous) permettra de résoudre le problème.
b. This will $\left\{\begin{array}{l}\text{enable}\\ \text{allow}\end{array}\right\}$ $\begin{array}{l}\text{us to solve the problem.}\\ \text{the problem to be solved.}\end{array}$
(65) a. Il (nous) a ordonné d'étudier ce problème.
b. He ordered us to study that problem.
((?))He ordered that problem to be studied (t)

7. In what precedes our concern has been with the properties of infinitive clauses under *cause*, *make*, *get* and *have*. It should be added, however, that the verbs *get* and *have*, but not *cause* and *make* can also take a present participle clause as their object. Compare:

(66) They had us work hard.
(67) They had us working hard.
(68) I'll get him to work for you
(69) I'll get him working for you.

Semantically, the difference between the two types of construction seems to be that the infinitive refers to the factual aspect of the activity, whereas the *ing*-form, being more descriptive, focuses attention on the way the activity is performed. Thus (66) just states that is is a fact that we (regularly) worked for him, whereas (67) draws attention to the way the activity is performed (mostly, though not necessarily, in one particular case). (68) means that I shall persuade him to work for you (and not for somebody else), whereas in (69) the emphasis is on the nature of the work that I shall require him to do: even though the adverb *harder* is not added, the reference may be taken to be to an intensification of the work.

Turning to syntax, there appears to be little difference between present participle and infinitive clauses under *have* and *get* as far as main clause passivisation is concerned. Once again this transformation is impossible, as is apparent from the following instances:

(70) *We were had working hard.
(71) *He was got working for you.

But there is a clear difference between the two types of construction with respect to subclause passivisation. While this transformation has been seen to be quite normal with infinitive clauses provided it is followed by *be*-deletion, it is impossible with present participle clauses, cf.

(72) *I had that door being painted, when it started raining.
(73) *I got him being cross-examined when the terrorists burst into the room and liberated him.

Double possivisation is, predictably, totally impossible, cf.

(74) *That door was had being painted when it started raining.
(75) *He was got being cross-examined when the terrorists burst into the room and liberated him.

As for *cause*, Leonhardi & Welsh (1969, 51) have the following example:

(76) A road accident caused my being late.

This instance might be taken to indicate that *cause* can have a gerund clause as its object. However, my informants regard this sentence as either ungrammatical or only marginally possible. Those who take the latter view tend to agree with my comment that (76) differs from *A road accident caused me to be late* in that it presupposes that the addressee is familiar with the fact of my being late, no such presupposition being required for the felicitous use of the infinitive construction.

8. So far we have considered only one French causative verb, viz. *faire*. Semantically related to *faire* is the verb *laisser*, which can be used in the same paradigms as *faire*, cf.

(77) a. Elle a laissé danser son mari.
b. Elle a laissé lire ce roman à son mari.
c. Elle a laissé tuer son mari par son amant.
d. Elle l'a laissé danser.
e. Elle lui a laissé lire ce roman.
f. Elle lui a laissé tuer son mari.

But in addition we also have:

(78) a. Elle a laissé son mari danser.
b. Elle a laissé son mari lire ce roman.
c. Elle a laissé son amant tuer son mari.
d. Elle l'a laissé lire ce roman.
e. Elle l'a laissé tuer son mari.

So, with *laisser* we can have either the same construction as with *faire* or that found with the English verb *make*, where the subject of the infinitive clause becomes the direct object of the main clause as a result of subject-to-object raising. Putting it differently, *laisser* allows of either the verb phrase or the subject of the infinitive clause being raised into the main clause. Interestingly, the English equivalent of *laisser*, viz. *let* seems, at first sight at least, to exhibit the same sort of behaviour. As regards subject-to-object raising the possibility of applying this transformation with *let* is demonstrated by instances like the following.

(79) (?) We were let know that he was ill.

It should, however, be added that passivisation of the main clause is presumably rare and that many native speakers reject sentences like (79) as ungrammatical. There is no doubt that (?) *He was not let marry that girl*[7] is far less current than *He was not allowed to marry that girl*. So, though main clause passivisation is not impossible with *let*, it is certainly unusual. By contrast, subclause passivisation is quite current. It is found in (80), derived from (81).

(80) She let her husband be killed.
(81) She let $_S$[somebody kill her husband]$_S$

This time, however, *be* must be retained. In fact, *let* seems to be the only English verb that can take a passive object clause with a plain infinitive as its verbal.

Let us next see whether there is any evidence that also the verb may be raised out of the subclause under *let*. Such evidence might be taken to be provided by instances like *He let slip the opportunity*, where, contrary to what we have in *He let the reins slip out of his hand*, the infinitive is not separated from the verb *let*. This unit might be looked upon as the result of the application of an English counterpart of the French *faire*-attraction transformation, applying to a deep structure something like

(82) He let $_S$[the opportunity slip]$_S$

A similar analysis might be applied to sentences like

(83) He let fall/drop a hint.
(84) He let go his hold.

There are, however, two objections to this analysis: a) in French *faire* can be followed by almost any verb, whereas *let* only combines with a handful of verbs; b) in French the subclause in the deep structure of *Elle l'a fait danser*, viz.

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[7] For textual instances of this construction, see Van Ek (1966 : 115) and especially Jespresen (1940 : 318), who also quotes instances of the type *I was ever let TO go*, which strike some native speakers as even more odd than the construction without *to*.

(85) Elle a fait $[_{S}$il danser$]_{S}$

can of course also occur independently (as in *Il danse*), whereas the subclauses that we would need to set up in English cannot occur independently. As a matter of fact we cannot have:

(86) *The opportunity slipped.
(87) *The hint fell/dropped.
(88) ??His hold went.

On account of these facts it is better to consider *let slip*, *let fall*, *let drop* and *let go* as compound verbs which do not allow of any further synchronic syntactic analysis. It stands to reason that on this view such rather rare passive sentences as *The opportunity was let slip* cannot be regarded as examples of of nominative + plain infinitive construction, as is suggested by Zandvoort (1965:19; fnt 1). Considering that sentences like *The opportunity was let slip* apparently constitute the only evidence for the existence of the nominative + plain infinitive construction in English, it may be assumed that the construction does not occur in English at all.

9. In section 5 I discussed sentences of the type *He saw her avenged*, pointing out that there appear to be very severe semantic constraints on the construction. Thus a sentence like **I shall see this suit cleaned by next week* is felt to be ungrammatical. Instead one has to say

(89) I shall see (to it) that this suit is cleaned by next week.

This brings us back to finite clauses as the object of causative verbs. In section 2 I observed that *faire* can have a (*en sorte*) *que* clause as its object. As for English, finite clauses do not occur as the object of the verbs *cause*, *make*, *get* and *have*, cf.

(90) *She $\begin{Bmatrix}\text{caused}\\ \text{made}\\ \text{got}\\ \text{had}\end{Bmatrix}$ that her lover killed her husband.

By contrast, the verb *see to* is very current with a finite clause, which may, needless to say, also be active, as in:

(91) I shall see (to it) that he comes tomorrow.

It is worth emphasizing that the verb in question is the prepositional verb *see to*, not just *see*. This is evident from sentences such a *I'll see to the execution* *of your orders, I'll see to that right away.* In this connection it is interesting to note that in English it is impossible for a *that*-clause to function as the object of a preposition. In this respect English differs sharply from a language like Norwegian, whose syntax is otherwise closely related to that of English. Thus in Norwegian sentences like *Jeg var sikker på at han var et farligt menneske 'I was certain of that he was a dangerous man'* are extremely current. In English, on the other hand, either the preposition must be deleted or a gerund clause must be used instead of a *that*-clause. Compare:

(92) I was surprised { at the news.
* at that he was ill.
that he was ill.
at his being ill. }

With one or two verbs, however, another pattern is possible: one with *it* inserted between the preposition and the *that*-clause. One such verb is precisely the causative verb *see*, another is *depend*, as in:

(93) I shall see to it that he comes tomorrow.
(94) You may depend upon it that every member of the Committee will support your proposal. (quoted by Hornby (1954:76)).

But *see*, unlike *depend*, allows of another construction where both the preposition and *it* are left out, yielding:

(95) I shall see that he comes tomorrow.

It is worthwhile observing that French has a syntactically analogous construction, as exemplified in:

(96) Je veillerai à ce qu'il vienne demain.

Like *see to*, *veiller à* is a prepositional verb, cf. *Je veillerai à l'exécution de vos ordres*. Both with *veiller* and with *see* the verbal noun groups can be replaced by finite clauses provided the latter are separated from the preposition by a pronoun, *ce* in French, *it* in English. In French this type of construction is very frequent, being mainly found with the prepositions *à* and *de*. Gross (1968) quotes numerous examples of it.[8] As regards English, the construction seems to be limited to the verbs *see* and *depend* and one or two more (cf. Hornby (1954:76))r. The reason for this difference in frequency between the two languages probably lies in the fact that English, unlike French, can, and very often does, use gerund clauses with an overt subject as the object of prepositional verbs. As is the case with English *see*, but not *depend*, the preposition may sometimes be deleted in French as in *Je m'étonne (de ce) qu'il soit venu*, but this sort of deletion is impossible with the causative verb *veiller*, cf. **Je veillerai qu'il vienne demain*.

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[8] It is worth pointing out that in German and Dutch, too, *dass/dat* clauses can easily be made to depend on prepositions provided the groups *Prep+es/Prep+het* are transformed into *da+Prep/er+Prep*, respectively. Thus, corresponding to *I saw to it that he was warned* we have *Ich sorgte dafür, dass er gewarnt wurde* (from* *Ich sorgte für es, dass er gewarnt wurde*) and *Ik zorgde ervoor dat hij gewaarschuwd werd* (from* *Ik sorgde voor het dat hij gewaarschuwd werd*).

APPENDIX

1. In section 5 I followed Chomsky (1967) in deriving *the destruction of the city by the enemy* from *the enemy's destruction of the city*. However, this analysis works much better for English than for French, which has only the former type of construction. If we want to apply Chomsky's analysis to French, we see that agent-postposing becomes obligatory and subject-preposing is impossible. A comparison with a few other languages, such as German, Dutch, Russian and Polish shows that all these languages have the construction that corresponds to the one that is the only possible in French, whereas constructions of the type *the enemy's destruction of the city*, which Chomsky takes to be basic, are all but inexistent. Compare (97) with (98).

(97) Die Zestörung der Stadt durch den Feind. De verwoesting van de stad door de vijand. Razrušenie goroda vragom (Comrie (1976:182)). Zniszczenie miasta przez nieprzyjaciela (Comrie (1976:190)).

(98) ?Des Feindes Zerstörung der Stadt.
?'s Vijands verwoesting van de stad.
*Vraga razrušenia goroda (Comrie (1976:182)).
*Nieprzyjaciela zniszczenie miasta.

If we are to construct a maximally simple grammar that applies to a variety of languages making use of a maximum of universal rules and a minimum of language specific rules, it seems reasonable to hypothesize that the basic form should be *the destruction of the city by the enemy* rather than *the enemy's destruction of the city*. Moreover, the form which Chomsky considers to be basic is often impossible even in English, where the Saxon genitive is, as a rule, restricted to nouns with the feature [+animate]. If we consider such derived verbal noun groups as *the destruction of the city by the enemy* as basic, then there would, on the face of it, no longer be any parallelism with the structure of sentences, which would obviously be a considerable setback. But there is in fact a very simple way of saving this parallelism. Rather than modelling the deep structure of verbal noun groups on that of sentences we can try to derive sentences from underlying structures which closely resemble the surface structure of verbal noun groups. On this hypothesis the deep structure of ***the enemy destroyed the city*** and ***the city was destroyed by the enemy*** would be something like:

$$\left[\text{Past}\ \begin{Bmatrix}\text{Active}\\ \text{Passive}\end{Bmatrix}\right]_{M}\ \left[\text{destroy the city by the enemy}\right]_{\text{Prop}}$$

This would be a deep structure along the lines of Fillmore (1968), but, unlike what Fillmore proposes, active and passive sentences would have a common voice-neutral nucleus, which would resemble the deep structure of verbal noun groups very closely. On this proposal sentences like *Elle a fait tuer son mari par son amant* would immediately reflect deep structure. This would also be the case with sentences like (99), which might be taken to derive from (100).

(99) Elle a fait voir ce roman à son amant.
(100) Elle a fait $[_{S}$ voir ce roman à son amant $]_{S}$

In this deep structure *à son amant* could be interpreted as Fillmore's underlying dative which, he suggests, occurs in the deep structure of sentences containing stative sense perception verbs like *see, feel* and *hear*. This dative would then be kept in the surface structure of infinitive clauses embedded under *faire* and no ad hoc *à*-insertion transformation would be required. Although it is impossible to give hard and fast rules as regards the choice between the *à* and the *par* construction in an infinitive clause functioning as the object of *faire*, it is crucial that the *à* construction is typically found with such stative verbs as *voir, entendre, sentir* and *connaître*. Quite revealingly, Seuren (1973:48) points out that *lire* "occurs in the active as well as in the passive under *faire*, although, if passive, it means 'check on mistakes' or the like, rather than 'take cognizance of', which is what the active means".

As regards finite clauses the occurrence of *par* in passives (cf. *Ce roman a été lu par son amant*) might be accounted for by a rule that substitutes *par* for the dative marker prior to subject-selection. At first sight this hypothesis seems to lose a great deal of its plausibility when confronted with a sentence such as *Elle lui a fait tuer son mari*, which requires the inverse type of rule: one substituting a dative for an underlying *par* phrase (which is found if there is no pronominalisation, as in *Elle a fait tuer son mari par son amant*). But the point is that the dative in this type of sentence must be regarded as very superficial, as is shown by the fact that it is not allowed to occur in cleft sentences, cf. *C'est* $\begin{Bmatrix}{*}\textit{à}\\ \textit{par}\end{Bmatrix}$ *lui qu'elle a fait tuer son mari*. So whatever the underlying form of *lui*, it cannot be a dative. Therefore we do not have the impossible derivation dative → *par*-phrase → dative.

Although the proposal being made here, according to which the surface structure found with infinitive clauses embedded under *faire* is very close to deep structure, is certainly not without its problems, it does seem to be more in keeping with the facts of French syntax than an analysis that involves partial passivisation.

2. We have seen that the facts concerning main clause passivisation suggest that *make* is a raising verb whereas *have* is not. It is tempting to quote instances like the following as further evidence for this view.

(101) Why did you run so fact? Because she $\left\{\begin{matrix}\text{made}\\ \text{*had}\end{matrix}\right\}$ me.

It might be assumed that this construction is possible only if the subject has been raised out of a plain infinitive clause and transformed into the object of the main clause. But as it appears to occur with a few verbs only, it is hard to come up with any generalizations. Moreover, one of the verbs with which it does occur presents a serious problem: many speakers who find *He wouldn't let me* perfectly normal, do not seem to like (?)*He was let leave early*, which we would expect them to do if *let* was a raising verb.

Verbs that require a *to*-infinitive complement cannot occur in the pattern under discussion (cf. **Because she got me*), but they do occur in the pattern *Because she got me to*, which involves the use of *anaphoric to* (which refers to a previously mentioned VP, which may be taken to be repeated after *to* in deep structure and deleted subsequently). At first sight also the occurrence of this pattern might be taken to be relatable to subject-to-object raising. Compare *Why are you running so fast? – Because she wants/likes me to* (t) with *Is he an honest man? –* **Well, I believe/imagine/suppose him to.* Verbs like *want* and *like* do not allow subject-to-object raising (cf. the ungrammaticality of the passives **He is wanted/liked to go othere*), whereas verbs of the *believe* type do (cf. *He is believed to be an honest man*). So the anaphoric *to*-construction would appear to be possible only with such verbs as do not allow subject-to-object raising. In *Because she got me to me to* might be taken to still consitute a subclause, with *me* functioning as the subject and *to* representing the predicate. However, matters are more complicated. Thus it is possible to say ((?)) *Because he meant/allowed me to* (t), even though *mean* and *allow* are raising verbs (cf. the passives *He was meant/allowed to meet her*). Moreover, we can also have *Because he persuaded/forced/compelled/obliged me to* (t), although it can be argued that *me* is the object of *persuade/force/compel/oblige* both in deep and in surface structure, so that all that remains of the deep structure infinitive clause is the particle *to*. Accordingly, rather than being an automatic consequence of the syntactic structure of the sentence in question, the (un-)grammaticality of the anaphoric *to*-construction seems to be primarily a function of the semantics of the main clause verb, the construction being found mainly with verbs of volition (*want, hate*, but also *mean, allow* and *force, compel*, etc.) but not occurring with opinion verbs like *believe* and *suppose*. Moreover, being a typically colloquial construction, it tends to be restricted to verbs that are current in everyday speech. As pointed out above, the verb *get*, though syntactically different from it, appears to be pretty close in meaning to the verb *persuade*. Hence there is nothing surprising about it agreeing with that verb in taking the anaphoric *to*-construction.

As for the verb *cause*, both **Because he caused me* and **Because he caused me to* appear to be unacceptable, although the latter is perhaps slightly better than the former. The former is out because *cause* is a) not used with a plain infinitive complement, b) not current in colloquial English and, moreover, not a raising verb, if used at all, in that type of English. As for *?*Because he caused me to*, we saw just now that *cause*, unlike *make* and *get*, refers to an abstract, often indirect type of causation which has little to do with the exertion of will power on the part of the grammatical subject. In addition, it is a typically formal verb. These facts may be held to account for the quasi-ungrammaticality of the construction.

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ON ITEMS INTRODUCING FINITE RELATIVE AND INTERROGATIVE CLAUSES IN ENGLISH AND DUTCH*

Frits Stuurman

University of Utrecht

I. INTRODUCTION

In this paper, some phenomena about the items introducing finite relative and interrogative clauses (complementizers, pronouns and determiners) in English and Dutch are reviewed. It will be suggested that a generalization obtains across the two languages that the rule that moves constituents containing pronouns and determiners in such clauses can only be characterized as a 'complementizer substitution' (rather than 'complementizer attraction') transformation if there is a complementizer in the language which belongs to the same morphological class as the characteristic item contained in the constituent moved.

In section II below it is demonstrated that in English there is one morphological class of pronouns and determiners characteristic of finite relative and interrogative clauses, viz. *wh-* items, whereas in Dutch there are two such morphological classes, *d*-items and *w-* items. Among the complementizers in relative and interrogative clauses, English again has a member of the morphological *wh-* class (*whether*); by contrast, Dutch does have a *d-* item among its complementizers (*dat*), but no *w-* item. In section III it is shown that whereas moved English *wh-* constituents (i.e. constituents containing a *wh-* item) and Dutch *d-* constituents are mutually exclusive with complementizers (and will consequently by said to have been moved by a 'complementizer substitution, transformation), Dutch *w-* constituents can freely (though with stylistic consequences) be followed by complementizers (and have therefore been moved by a 'complementizer attraction' transformation). Finally, in section IV it is suggested that apparently arbitrary differences between English and Dutch complementizer-pairs can be systematically accounted for in the approach developed below.

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II. ITEMS INTRODUCING FINITE RELATIVE AND INTERROGATIVE CLAUSES

English finite relative and (pronominal) interrogative clauses may contain any one of the following pronouns and/or determiners: *who*, *whom*, *whose*, *which*, *what*, *where*, *when*, *why*, *how* and compounds derived from these, mainly in *-ever* (e.g. *whatever*; also: *whence* and 'prepositional adverbs' such as *whereat*, *whereby*, etc.). On the basis of the morphological element shared by most of these, they are commonly referred to as *wh-* pronouns and determiners. Thus for instance:

(1) the girl *wh*o you kissed is my sister
(2) *wh*ich girl did you kiss
(3) he asked *wh*ich girl you kissed

In the parallel cases Dutch selects from two sets of pronouns and/or determiners: the so-called *d-* set (*die*, *dat*) and a set most of whose members share the morpheme *w-*, the *w-* set (*wie*, *wat*, *wiens*, *wier*, *welk(e)*, *wanneer*, *hoe*, *waar*, and the 'prepositional adverbs' based on *waar* such as *waarop*, *waarbij*, etc.). Thus compare English (1) — (3) to their Dutch equivalents (4) — (6) respectively:

(4) a het meisje *d*at je kuste is mijn zuster
b het meisje *w*at je kuste is mijn zuster[1]
(5) *w*elk meisje kuste je
(6) hij vroeg *w*elk meisje je kuste

It will be noted that in (4) there are two possibilities: *dat* and *wat*. This may suggest that only (4b) is really a parallel to (1), (4a) rather being like (7):

(7) the girl *that* you kissed is my sister

Such an identification of Dutch *dat* as in (4a) with English *that* as in (7) might seem to get additional support from the fact that the morphemes *that* and *dat* are also parallel in both appearing as demonstrative pronouns/determiners:

(8) I wanted *that* (thing)
(9) ik wilde *dat* (ding)

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[1] Many of the Dutch examples are subject to dialectal differences in acceptability; thus in colloquial Dutch (4b) is far more normal than (4a), the latter, however, being preferred in formal and/or written Dutch.

However, there are a number of differences in the behaviour of the demonstrative *that* as in (8) and the *that* appearing in (7): see (10) — (14); rather, the latter is similar to the complementizer *that*: see (15). On the other hand, the behaviour of the demonstrative *dat* in (9) is very similar to the *dat* appearing in (4a) (and different from the complementizer *dat*, see below): see (16) — (21).

(10) a I wanted _that_ thing (=(8))
b the thing _that_ I wanted (cf. (7))
(11) a I looked _at that_
b *the thing _at that_ I looked
(12) a *I wanted _that_ thing*s*
b the thing*s* _that_ I wanted
(13) a I wanted _those_ thing*s*
b *the thing*s* _those_ I wanted
(14) a *I wanted — thing
b the thing — I wanted

Thus, with respect to the (im) possibility of being preceded by a preposition (such as *at*: (11)), the (in) compatibility with a plural noun (see (12) — (13)), and optional/obligatory nature (see 14)), the two *that's* differ consistently. The *that* introducing a relative clause (as in (7) and (10b)) rather patterns in the same way as the complementizer *that* (cf. (15)), with which it may therefore be identified:

(15) a he said _that_ I wanted it
*b he was amazed _at that_ I wanted it
*c he said _those_ I wanted it
d he said — I wanted it

Now consider the Dutch examples (16)—(21), similar in principle to English (10)—(14):

(16)a ik wilde _dat_ ding (=(9))
b het ding _dat_ ik wilde (cf. (4a))
(17)a *ik zorgde _voor(-)dat_
b *het ding _voor(-)dat_ ik zorgde
(18)a *ik wilde _dat_ ding*en*
b *de ding*en* _dat_ ik wilde
(19)a ik wilde _die_ ding*en*
b de dingen _die_ ik wilde
(20)a *ik wilde _dat_ boot
(I wanted that boat)
b *_de_ boot _dat_ ik wilde

(21)a ik wilde *die* boot
b *de* boot *die* ik wilde

The Dutch *dat*'s of (4a), (16b) and of (9), (16a) consistently behave in the same way with respect to the impossibility of being preceded by a preposition (such as *voor*: (17)), incompatibility with a plural noun (see (18)) and incompatibility with a singular noun of *de* gender (see (20); cf. '*het ding*', *'*de* ding', *'*het* boot', '*de* boot'). On this basis both these *dat*'s are identified as pronouns/determiners (either demonstrative or relative respectively). Consequently, (4b) is not to be considered as a parallel to (7) (nor (16b) to (10b)):

(7) the girl *that* you kissed ...: *that*=complementizer
(4)b het meisje *dat* je kuste ... : *dat*=pronoun

However, the issue is complicated by the fact that in Dutch relative clauses also an introducing item *dat* may appear which does not behave as the *dat* exemplified so far:

(22) het moment *dat* je kwam
(the moment you came)

Applying the 'preposition', 'plural noun', and '*de* gender' tests to the *dat* in (22) we get:

(23)a hij betreurde *dat* moment (cf. (16a))
(he regretted that moment)
b het moment *dat* je kwam (=(22))
(24)a **hij schaamde zich voor(-)dat*
(he was-ashamed-about that)
b het moment *voor-dat* je kwam
(25)a *hij betreurde *dat* moment*en*
b de moment*en* *dat* je kwam
(26)a hij betreurde *die* momenten
b *de momenten *die* je kwam
(27)a *hij betreurde *dat* dag
(he regretted day)
b *de* dag *dat* je kwam
(28)a hij betreurde *die* dag
b *de dag *die* je kwam

As was shown to be the case with the *that* introducing relative clauses in English, this Dutch *dat* patterns like the complementizer *dat*:

(29)a hij zei *dat* ik het wilde
(he said that I it wanted)

b hij zei het *voor- dat* ik het wilde
(he said it before that I it wanted)
c* hij zei *die* ik het wilde

In addition to the complementizers *that* in English and *dat* in Dutch, each language has at least one more finite clause complementizer:

(30)a he said *that* I wanted it (=(15a))
b *he said *whether* I wanted it
c *he said *that whether* I wanted it
d *he said *whether that* I wanted it
(31)a *he asked *that* I wanted it
b he asked *whether* I wanted it
c *he asked *that whether* I wanted it
d *he asked *whether that* I wanted it
(32)a hij zei *dat* ik het wilde (=(29a))
b *hij zei *of* ik het wilde
c *hij zei *dat of* ik het wilde
d *hij zei *of dat* ik het wilde
(33)a *hij vroeg *dat* ik het wilde
b hij vroeg *of* ik het wilde
c *hij vroeg *dat of* ik het wilde
d hij vroeg *of dat* ik het wilde[2]

From the complementary distribution of *whether* with *that* it can be concluded that, given that *that* is a complementizer in (30a), *whether* is a complementizer as well in (31b). The situation in Dutch is slightly more complicated, since *of* and *dat* are not mutually exclusive, as (33d) shows. The approach implicitly adopted in Paardekooper (1971), as evidenced by his spelling: *ofdat*, is to consider *of dat* as one word. This solution, (getting some support from the impossibility of the opposite sequence (see (33c)), is the simplest one for our purposes: thus *of/ofdat* is in complementary distribution with *dat*, so that, given that *dat* is a complementizer in (32a), *of/ofdat* in (35b) and (33d) is a complementizer as well.

Summarizing, it appears that both English and Dutch have one finite clause complementizer that belongs to the same morphological class as (some of) the pronouns and determiners characteristic of relative and interrogative clauses, and one finite clause complementizer that does not thus belong to a morphological class of relative and interrogative pronouns and determiners. These facts may be schematically represented as in Table I:

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[2] (33d) is rather colloquial, (33b) being preferred by many speakers.

	En. *th-*	En. *wh-*	Du. *d-*	Du. *w-*	Du. *o-*
pronouns/determiners	−	+	+	+	−
complementizers	+	+	+	−	+

Table I: Items introducing English and Dutch finite relative and interrogative clauses, classified morphologically.

III. MOVEMENT IN FINITE RELATIVE AND INTERROGATIVE CLAUSES

In what follows it is taken for granted that the *wh-*, *d-* and *w-* constituents that introduce finite relative and interrogative clauses are not base-generated *in situ*, but are generated in those positions that allow them to be assigned the appropriate grammatical functions. Thus, *who* in (1), *which girl* in (2) and (3), *dat* and *wat* in (4), and *welk meisje* in (5) and (6) are direct objects: underlying these examples would therefore be structures approximated in (34) and (35):

(34)a ... you kissed *who* ... (underlying (1))
b ... you kissed *which girl* ... (underlying (2) and (3))
(35)a ... je *dat* kuste ... (underlying (4a))
b ... je *wat* kuste ... (underlying (4b))
c ... je *welk meisje* kuste ... (underlying (5) and (6))

To get the direct objects of (34) and (35) into their clause-introducing surface position, we assume a structure preserving transformation which moves them into COMP (cf. Emonds (1976)), COMP being the clause-initial category into which complementizers may be placed

(36) SD: ... [COMP ...] ... X ...
1 2
SC: 1 2⇒2 ø
(X=English *wh-*, Dutch *d-*, *w-*)

In (present-day) English, if a *wh-* constituent is moved into COMP it is mutually exclusive complementizers with:

(37)a the girl *who* you kissed ... (=(1))
b *the girl *who that* you kissed
c *the girl *that who* you kissed
d *the girl *who whether* you kissed
e *the girl *whether who* you kissed

We will therefore call *wh-* movement a complementizer 'substitution' transformation.

In Dutch, a moved *d-* constituent is also mutually exclusive with complementizers:

(38)a de jongen *die* je kuste (cf. (4a))
(the boy who you kissed)
b *de jongen *die dat* je kuste
c *de jongen *dat die* je kuste
d *de jongen *die of(dat)* je kuste
e *de jongen *of(dat) die* je kuste

Thus, Dutch *d-* movement, like English *wh-* movement, is a complementizer substitution transformation. A different picture emerges however in the case of *w-* movement: *w-* constituents in COMP are (more or less) freely followed (but never preceded) by complementizers:

(39)a het meisje *wat* je kuste
b het meisje *wat dat* je kuste[3,4]
c *het meisje *dat wat* je kuste
d het meisje *wat of(dat)* je kuste
e *het meisje *of(dat) wat* je kuste

The transformation which moves a constituent into COMP with the result that the moved constituent may co-occur with complementizers we will call a complementizer 'attraction' transformation.

To represent the facts dealt with in this section, the relevant parts of Table I (i.e. columns 2, 3, and 4) may be extended as in Table II:

	En. *wh-*	Du. *d-*	Du. *w-*
pronouns/determiners	+	+	+
complementizer	+	+	−
movement=	sub	sub	attr

Table II: Introducing items and movement transformations in English and Dutch finite relative and interrogative clauses, classified morphologically
(sub=complementizer substitution
attr=complementizer attraction)

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[3] Traditionally, the complementizers *dat* and *of(dat)* are said not to co-occur with relative pronouns/determiners (e.g., Rijpma and Schuringa (1969:161); van Calcar's (1973) doubts whether this tradition does justice to the actual data were confirmed in a small-scale experiment carried out by some students which showed that

(i) hij vroeg *wat of(dat)* je wilde
(he asked what you wanted)
(ii) het ding *wat of(dat)* je wilde
(the thing which you wanted)

are about equally accepted and both much better than

(iii)* het ding *dat of(dat)* je wilde

[4] (39b) sounds worse to me than (39d); however, both seem to me to be possible, which was also the judgement that emerged from the experiment alluded to in note 3.

The facts a presented in Table II suggest that there is, for English and Dutch, a correlation between whether the language has a complementizer of the same morphological class as the characteristic items in the constituents moved and whether the transformation that moves these constituents is a complementizer substitution or a complementizer attraction transformation.[5] Thus we get the generalization (40) across English and Dutch:

(40) In finite relative and interrogative clauses, movement transformations are only complementizer substitution transformations if a complementizer is available in the language which belongs to the same morphological class as the characteristic pronouns/determiners contained in the constituents moved

IV. ENGLISH AND DUTCH COMPLEMENTIZERS COMPARED

As a comparison of (10b) to (14b) and of (15a) to (15d) (here repeated as (41)) shows, the insertion of the complementizer *that* under COMP is optional in certain cases in English:

(41)a the thing *that* I wanted (=(10b))
b the thing I wanted (=(14b))
c he said *that* I wanted it (=(15a))
d he said I wanted it (=(15d))

This phenomenon has no direct parallel in Dutch (although, as (39b) and (39d) versus (39a) show, insertion of a complementizer under COMP is optional in Dutch if a *w*- constituent has been attracted to COMP):

(42)a het moment *dat* je kwam (=(22))
b *het moment je kwam
c hij zei *dat* ik het wilde (=(29a))
*hij zei ik het wilde

It would seem that the optionality of inserting English *that* versus obligatory insertion of Dutch *dat* under COMP correlate to whether or not these complementizers figure in Table II. In other words, *that* may well be less 'important' than *dat* because it does not have any implications with respect to whether a transformation is complementizer substitution or attraction.

Similarly, the difference between the English complementizer *whether* and the Dutch complementizer *of* now appears to be systematic. *Whether* is a

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[5] It should be emphasized that this paper restricts itself to these two languages; none of its claims are intended as candidates for universality, its only aim being to develop a systematic account of the phenomena discussed.

wh- item and thus correlates with *wh-* movement being a complementizer substitution transformation; by contrast, *of* (like *dat*) is not a *w-* item and thus *w*-movement is not a complementizer substitution transformation. It has often been argued (cf. Grimshaw (1977 : 211—214) and the references cited there) that English *whether* should be analyzed as *wh-+-either*. Such an analysis nicely fits in with the argument of this paper: it makes it possible to say that both English *either* and Dutch *of* can serve as either a conjunction in a correlative coordination or as a complementizer:

(43)a they ask *wh-either* John comes
b they ask *either* John or Peter
(44)a ze vragen *of* Jan komt
b ze vragen *of* Jan of Piet

Thus, *either*/*whether* and *of* are much more similar than they would appear to be at first sight: they have essentially the same distribution, appearing either as a correlative conjunction or as a complementizer; only, English *wh-* movement is a complementizer substitution transformation: thus, a *wh*-complementizer is required and therefore to *either* as complementizer *wh-* is added, so that it will actually emerge as *whether*.

V. CONCLUSION

The similarities and differences in the behaviour of English *that* and Dutch *dat* introducing finite relative clauses require a description by which *that* is always a complementizer, whereas *dat* may either be a complementizer or a pronoun. This means that Dutch has a morphological class of *d-* items which contains both *d-* pronouns and a *d-* complementizer, just as English has a morphological class of *wh-* items which contains both *wh-* pronouns and/or determiners and a *wh-* complementizer. However, Dutch also has a morphological class of *w-* items containing pronouns and/or determiners likewise introducing finite relative and interrogative clauses, but no complementizer. This correlates with a difference between movement transformations in finite relative clauses and interrogative clauses: *wh-* and *d-* movement are complementizer substitution transformations, *w-* movement is a complementizer attraction transformation. In this light it is possible to give a principled account of some otherwise arbitrary facts: the optionality of the English complementizer *that* versus the obligatoriness of the Dutch complementizer *dat* in many equivalent cases, and the relation between the English correlative conjunction *either* and complementizer *whether* and the Dutch correlative *of* and complementizer *of*.

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SOME OBSERVATIONS ON THE ENGLISH AND POLISH QUESTION-ANSWERING SYSTEMS

ANNA CHAREZIŃSKA

Maria Curie-Skłodowska University, Lublin

Despite some syntactic differences between English and Polish questions, it seems justified to claim that in English and Polish the relation between a question and its answer is of a similar nature in the sense that a proper answer supplies the information asked for in the question. Therefore, it seems possible to express the question answer relations by way of systematic rules which would hold true for two or more language. It goes without saying that the choice of the theoretical framework for such an analysis is of prime importance and preconditions the shape of the final results. It has been argued more than once by Contrastive Generative grammarians that some language facts cannot be compared along purely syntactic lines, i.e. without resort to semantics and pragmatics, if the comparison is to be meaningful and revealing. The present paper is meant to provide some support for the above claim, however, at the present moment we are not able to offer a formal analysis of the English and Polish question-answering systems, but a preliminary discussion on the subject.

The English question-answering systems were discussed by E. Pope (1972, 1973), therefore the English material will be taken from her analysis. It seems worthwile devoting more space to Pope's account since her claims are of a universal nature and might hold true also for the Polish material. Pope establishes two question-answering systems possible in natural languages: a positive-negative system and an agreement-disagreement question-answering system. In the former system an answer is positive (Yes) if it does not contain a sentential negation in its highest clause and negative (No) if it does. This system operates in English. In the agreement-disagreement system an answer is agreeing (Yes) if it matches the question with respect to negativity and disagreeing if it does not. There are four categories of answers to Yes-No questions:

positive question < positive answer (P.A.-positive agreement)
positive question < negative answer (N.D.-negative disagreement)
negative question < positive answer (P.D.-positive disagreement)
negative question < negative answer (N.A.-negative agreement)

Agreement and disagreement mean syntactic agreement and disagreement with respect to the negativity of a question and its answer.

As far as positive questions are concerned, despite some syntactic differences (discussed in a number of works, e.g. Fisiak et al. 1978, Krzeszowski 1974) we may assume that Polish and English questions are basically similar and are used in similar contexts but for the fact that "a number of English positive questions appear in Polish as negative questions ... In English a negative question might sound rude, while in Polish it is just the more polite way of asking ("would-you-mind" type) e.g.

Have you seen him between eleven and twelve?
Czy nie widziałeś go ... "(Cygan 1973 : 321)

Answers to positive questions are always:[1]

No+neg S and Yes+S
Nie+neg S and Tak+S

irrespective of the answering system operating within the language:

Has John left yet?
No, he hasn't.
Yes, he has.
Czy Janek już wyszedł?
Nie, jeszcze nie.
Tak, już wyszedł.

A negative answer always means disagreement whereas a positive answer means agreement.

The situation becomes more complex when we turn to negative questions as the two systems diverge. English, which basically has the positive-negative system, displays the following phenomenon:
(Pope 1973 : 489):

1) Q. Doesn't anybody like you?
No (not(anybody likes me))⇒Nobody likes me (N.A.)
(not not (anybody likes me))⇒(ø) (anybody likes me)
⇒? Yes, somebody likes me. (P.D.)

---

[1] Nie — positive sentence or Tak — negative sentence does not necessarily mean that the answer must be formulated in this way, it may mean that the answer would be of that form if No or Yes were to be followed by a sentence.

2) Q. Does nobody like you?
Yes (nobody likes me) (N.A.)
? No (not) nobody likes me()⇒Nobody doesn't like me
No, somebody likes me. (P.D.)

In the first example we see the positive-negative question-answering system at work while in the second set of answers the agreement-disagreement system comes into prominence. The latter system is however less favoured in English and operates only when questions with NP negation are not considered to be negative.[2]

Pope's rules for English answers are as follows:

Sneg answer- →negative (No)
-Sneg answer →positive (Yes) (Pope 1972 : 199).

These rules hold true also for texts where a negative statement is followed by a confirmation or a denial of what has been previously asserted:

3) He doesn't want to work.
No, he doesn't. (N.A.)
Yes, he does. (P.D.)
*Yes, he doesn't.
*No, he does.

Therefore, if a negative statement or question is followed by a negative response, it means agreement on the part of the hearer.

As has been stated by Zabrocki (Fisiak et al. 1978 : 193) "in Polish, however, the use of "nie" always indicates a disagreement, the denial of what has been previously asserted, e.g.

A: On nie chce pracować. B: Nie, on chce. (disagreement)
(?Nie, on nie chce)
A: On chce pracować. B: Nie, on nie chce. (disagreement)
(?Nie, on chce)"

Therefore, the relation between a statement and its comment or response seems to be of agreement-disagreement type, and we might apply Pope's rules (1972 : 199), in a slightly paraphrased form, to the above sentences:

αSneg statement, -αSneg comment →disagreement
αSneg statement, αSneg comment →agreement

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[2] Pope introduces the notion of Discourse Sentential negation which she defines in the following way: "In a set of related sentences, the first sentence is an instance of DS negation if only the obligatory negative placement rules have applied to it. The obligatory rules are the one that attaches negatives to the auxiliary and the one that incorporates negatives into indefinites which precede the auxiliary ... Consequently, only negative questions (those with a negative attached to the auxiliary) are instances of discourse sentential negation" (1972:201).

Naturally, absolute negation (nie) is employed whenever a disagreement between a statement and its comment occurs.

It seems that by way of analogy these rules might be applied to negative questions and their answers. (Cygan 1973 : 324) states:

"In answers to general questions (and in comments on statements) in the English system the form of the question (or statement) does not count, the answer (comment) being entirely dependent on the actual fact (extra-linguistic situation). In Polish two factors, viz both the form of the question (statement) and the situation are interrelated and bear upon the form of the answer (comment). If the two systems are thought of in mathematical terms, the English system is reminiscent of addition of a relative number (positive or negative) to a number which is indifferent as to its sign, i.e. "O" (since only O=+O or -O) ... The Polish system, which involves two factors, resembles mathematically multiplication of relatives numbers, where two identical signs yield a positive result, while two opposite signs result in the negative meaning of the product. Thus for Polish we have:

Form of question	*Fact*	*Answer*
positive	positive	tak
positive	negative	nie
negative	positive	nie
negative	negative	tak"

From the above table it follows that Polish is a language of the agreement-disagreement question-answering system. However, as the following quotations from various literary works show, this is too broad a generalization:

6. Czy nic panią nie zaniepokoiło?[3]
Nie, nic.
Didn't anything alarm you?
No, nothing.
7. Czy pani doprawdy nie wie co się stało?
Nie, nie wiem.
Don't you really know what happened?
No, I don't know.
8. Czy moja żona nie telefonowała?
Nie.
Didn't my wife telephone?
No.

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[3] The examples come from the following sources: example 6: Clifford (1970:56); example 7: Clifford (1970:81); example 8: Kłodzińska (1969:146); example 9: Kłodzińska (1969:187) example 10: Kłodzińska (1969:96); example 11: Pisarkowa (1975:172) example 12: Dostojewski (1977:276); example 13: Dostojewski (1977:493); example 14: Dostojewski (1977:508).

9. Czy nie zostawił jakiejś wiadomości?
Nie, nic nie zostawił.
Hasn't he left some message?
No, he hasn't left anything.
10. Czy któryś z panów nie znalazł mego długopisu?
Owszem, zostawił pan na biurku.
Hasn't one/some of you found my pen?
Why yes, you have left it on the desk.
11. Ty też nie przychodzisz?
Tak. (nie przychodzę)
You too aren't coming?
Yes. (I'm not coming)
12. Nie ożeniłeś się?
Nie, nie ożeniłem się.
Didn't you get married?
No, I didn't.
13. Czy z pana nigdy się nie wyśmiewała?
Nie.
Didn't she ever laugh at you?
No.
14. Czy nie zwracał się do pana z prośbą o pożyczkę wielce szanowny książę?
Didn't His Highness Prince ever tap you for a loan?
No, he didn't.
15. Czy kogoś jeszcze nie ma?
Tak, paru osób.
Is someone not here yet?
Yes, a few people.
16. Czy nie zdążę już na żaden pociąg?
Nie, zdąży pani.
Won't I catch any train?
No, you will.
17. Nie lubisz mnie, Cortez?
Ależ tak, lubię cię.
You don't like me Cortez?
Why yes, I do like you.

As can be seen from the above examples, answers to negative questions may take the following forms:

Nie+negative sentence (6, 7, 8, 9, 12, 13, 14)
Tak+negative sentence (11, 15)

Tak+positive sentence (10, 17)
Nie+positive sentence (16)

In view of the above facts two questions arise. One is whether we should treat all questions containing the negative particle "nie" in preverbal position as negative questions. If so, what is the principle governing the distribution of absolute *Tak* and *Nie* answers in Polish?

It is not always clear which sentences should be treated as negative. For Cygan a sentence is negative when the verb is negative:

"Instead of a negative sentence (negative verb) we may have the negative element placed next to some other part of the sentence the result being a positive sentence with only part of it negative". (1973 : 306). However, Pasicki (1976 : 106) is of a different opinion:

"It seems that sentences ... where only the verb phrase is negated, ought to be treated as ordinary affirmative sentences containing a negated element, rather than as negative sentences". A nice way out of this seeming impasse is offered by Nagucka's proposal (1978 : 35—36):

"The initial statement is that for S two notions are relevant, that of modality and that of proposition.

S — Modality Proposition

Modality contains semantic primitives, one of which is "I diswant" (Nolo) responsible for negation ... In our understanding of the mental act of negation there are two different relations affected by it and next involved in the grammatical process of negativization. They are: 1) the relation between NPs and VP, or the relation between VP and NPs, and 2) the relation between Det and N ... By convention we may agree that whenever in the derivation of the sentence thare appears any one or all of the relations given above the process of negativization may take place, or to put it differently, any relation specified in terms of grammatical categories (1—2) is liable to the act of negation, or rather that any act of negation refers to any or all of the relations specified in grammatical terms". Hence all sentences containing negation have the following semantic structure:

nolo r (argument (s) VP)

In negative questions modality would have to contain additionally the semantic primitive which would be responsible for the interrogative function of the sentence. Yet the exact nature of the relation between the two semantic primitives is still unclear. There is no doubt, however, that negative questions are of a very complex semantic character in their deep structure and that they carry additional implications and expectations which are absent in positive questions. Employing a negatiove question "the speaker seems to be communicating the fact that recent evidence suggests that the question will elicit a negative answer although previously the speaker would have expected an affirmative answer. "(Chafe 1970 : 322). In other words, a negative question has a positive supposition[4] and a negative expectation, in the sense that it expects a negative answer. Some types of negative questions seem to be exceptional in this respect however, as they either expect a positive answer or are neutral, i.e. have no bias at all, e.g.

18. Czy któryś z panów nie znalazł mego długopisu?
Hasn't one of you found my pen?
19. Czy nie dzwonił ktoś do mnie?
Didn't someone call me?
20. Czy nie widziałeś gdzieś mojego zeszytu?
Haven't you seen my notebook somewhere?
21. Czy nie jesteś jeszcze głodna?
Aren't you still hungry?
22. Czy nie mógłbyś mi podać tamtą książkę?
Couldn't you hand me that book?

Semantically, these questions are equivalent to their respective positive questions, that is, they are merely requests for information. It seems that they do not carry the implications which are typical of negative questions. They may even use the Accusative object case (e.g. 6, 22) although normally the object takes the Genitive case in negative sentences. Quite surprising then is the fact that in place of assertive-indefinite referential NPs their non-assertive-non-referential counterparts are sometimes used in these questions:

23. Czy nie dzwonił nikt do mnie?
24. Czy nie widziałaś żadnego z moich studentów?

As these questions expect a positive answer, a Tak+negative sentence answer would sound strange:

Czy nie dzwonił nikt/ktoś do mnie?
?Tak, nikt nie dzwonił.

A Nie+negative sentence answer sounds correct:

Nie, nikt nie dzwonił.
?Nie, dzwonił ktoś

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[4] Supposition is used here in the meaning of Pope: "Supposition of a question is not its expected answer, but the speaker's original belief with regard to the matter at hand. (By original belief I mean what the speaker had been supposing just prior to the event that prompted him to ask the question)". 1972:105).

Also a Tak+positive answer answer may be used:

Owszem[5] $\left.\begin{array}{l}\\ \\\end{array}\right\{$ dzwonił ktoś, ale nie przedstawił się.
Tak
Czy nie jesteś jeszcze głodna?
?Tak, już nie jestem
Nie, już nie jestem
Tak, jeszcze jestem
?Nie, jeszcze jestem

Note that in the last question "jeszcze" has the meaning "still" as in the positive sentence, therefore in a negative answer "już" meaning "any more" has to be used[6].

Since the answers to this type of questions are of the form Nie+negative sentence or Tak+positive sentence, one might be tempted to claim that this is an instance of the positive-negative question-answering system at work. Yet, it seems that a more faithful interpretation would be given if we did not take the form of the question into account but rather its meaning, which is clearly positive, not negative. How to account then for the presence of negation in these questions and what semantic interpretation is available for them, particularly that questions of the same form may have a negative meaning; compare:

25. Czy kogoś jeszcze nie ma?
Is somebody not here yet?
26. Czy ktoś czegoś jeszcze nie podpisał?
Has somebody not signed something yet?
27. Czy on często nie dotrzymuje słowa?
Is it often that he doesn't keep his promise?
28. Czy wielu twoich kolegów nie dostało się na studia?
Did many of your friends fail to get to the university?
29. Czy ktoś nie widział jeszcze moich nowych obrazów?
Has someone not seen my new pictures yet?

These questions, like the former type, also use non-specific referential forms "ktoś", "coś" (someone, something) but negation seems to play quite a different role here. Compare:

A. Czy ktoś nie widział moich nowych obrazów?
(I don't know where they are, perhaps someone has seen them somewhere)

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[5] "Owszem" is stronger than "tak", meaning "why yes". Perhaps that is why, it is more readily used in positive answers to negative questions than "tak" which is felt to be too weak.

6. Consult Pasicki's paper "JUŻ, JESZCZE and their English equivalents" on the distribution of these adverbs with regard to negation.

B. Czy ktoś nie widział (jeszcze) moich nowych obrazów?
(If there's anybody who hasn't seen them, I have them in my studio.)

In question B. negation is restricted to the verb only resulting in a different meaning, viz the speaker is interested in the negative fact, that is, in *not seeing* the pictures, whereas in question A. he is interested in a positive fact, i.e. in somebody's *seeing* the pictures. Not surprisingly then, the answers are different:

A. Czy ktoś nie widział moich nowych obrazów?
Nie (nikt nie widział)
Owszem, ja widziałam. Są...
B. Czy ktoś nie widział jeszcze moich nowych obrazów?
Owszem, *ja* nie widziałam.
Yes, I haven't seen them
?Nie, ja nie widziałam
Nie, wszyscy widzieli
?Tak, wszyscy widzieli
ktoś widział
ja widziałam
30. Czy on często nie dotrzymuje słowa?
Tak, często (nie dotrzymuje)
?Tak, zawsze dotrzymuje
nie często
rzadko
Nie, nie często
zawsze dotrzymuje
rzadko
31. Czy któryś z referatów nie został jeszcze wysłany?
Hasn't some paper been sent yet?
Tak, tylko nie wiem który (nie został wysłany)
Yes, but I don't know which one (hasn't been sent yet)
?Nie, tylko nie wiem który
Nie, wszystkie już zostały wysłane
No, all of them have been sent already
32. Czy kogoś nie lubisz?
Nie, *nikogo* nie nie lubię ———→ Wszystkich lubię
No, I don't like nobody ———→ I like everybody
Tak, ale nie powiem kogo (nie lubię)
Yes, but I won't tell you whom (I don't like)
?Nie kogoś nie lubię
?Tak wszystkich lubie

Answers to the above questions take the following form:

Nie+positive sentence
Tak+negative sentence

where "tak" is the confirmation of the form of the question and "nie" means disagreement through the intermediate stage of negating the form of the question and is realized either as a sentence with no negation or as a sentence with two negatives present, being then an overt negativization of the question:

Czy wielu twoich kolegów nie dostalo się na studia?
Nie, *nie*wielu *nie* dostalo się na studia

Therefore the relation between these questions and their answers is that of agreement-disagreement. Notice that in contrast to the previous type of questions where ktoś, coś (somebody, something) forms could be substituted with nikt, nic (nobody, nothing) forms, here the substitution results in a considerable change of meaning:

Czy kogoś jeszcze nie ma?
Czy nikogo jeszcze nie ma?

In the second question, negation is not limited to the verb only and the difference in meaning and therefore in the scope of negation between the two questions seems to parallel the difference in scope between the following sentences:

"Some of the girls didn't come.
$/_s$ some EXIST $/_s$ neg/ some of the girls came/
None of the girls came.
$/_s$neg$/_s$some EXIST$/_s$ some of the girls came/" (Hogg 1977:108).

Compare:

A. Czy ktoś jeszcze czegoś nie podpisał?
B. Czy nikt jeszcze niczego nie podpisał?
A. Czy kogoś nie lubisz?
B. Czy nikogo nie lubisz?
A. Czy ktoś nie zdał egzaminu?
B. Czy nikt nie zdał egzaminu?

Questions B. have a positive supposition and a negative expectation, therefore they often express astonishment, whereas questions A. are more neutral in this respect, that is, the speaker may have no supposition whatever as to the matter at hand, however, it is usually a negative event which prompts him to ask the question, hence the negative expectation of the question which is confirmed by a "tak" answer when the fact is negative. On the other hand, questions B., although they also seem to expect a negative answer, they may be freely answered with a Nie+negative sentence answer, perhaps because the expectation is weakened by an accompanying positive supposition:

33. Telefony? Phone calls?
Nie było ani jednego. There were none.
Jak to... Milo Rainey nie telefonował?
How come... Didn't Milo Rainey call?
Nie, Dade, No. Dade.
(Tak, nie telefonował)
34. Jak to nikogo nie ma?
How come nobody's here?
Nikt tu nie był?
Nobody was here?
Nie, nikt. No, nobody.
(tak, nikt)
35. Czy nie ma tu już mojego męża?
Ins't my husband here any longer?
Nie, już go nie ma, No, he isn't here
(Tak, już go nie ma)
36. Czy nikt nie wysłał jeszcze referatu na Konferencję?
Hasn't anybody sent his paper for the Conference yet?
Nie, nikt No, nobody
(Tak, nikt)
37. Czy nie dostałaś jeszcze wszystkich zaliczeń?
Haven't you got all the signatures yet?
Nie, jeszcze nie mam wszystkich
No, I haven't got all of them
(Tak, jeszcze nie mam wszystkich)

It turns out that both Tak+negative sentence and Nie+negative sentence are possible answers, however the former seem to me less natural. Still both possibilities exist in Polish, which means that the positive-negative and the agreement-disagreement question-answering systems coexist and that both "tak" and "nie" in answer to:

Czy nic nie kupiłaś?
Tak
Nie

may mean "I haven't bought anything". If we wanted to deny the expectation of the question, a one-word answer would be unsatisfactory and confusing. Therefore, a fuller answer would have to be used:

Ależ tak, kupiłam.
Nie, kupiłam.

This confirms Pope's hypothesis that Positive Disagreement is the most difficult category of answers to Yes-No questions. "There is no doubt that the act of disagreeing is more marked than the act of agreeing. It constitutes a departure from what is expected... If a question is negative in form, the easy answer is the one that is also negative in form" (Pope 1972:188).
Quite surprising then is the fact that in Polish not infrequently both possible answers are used:

38. Czy nikogo nie spotkałaś
Did you meet nobody?
Tak, nie, nikogo. Yes, no, nobody.

The first answer is the confirmation of the negative expectation of the speaker and the second is the answer to the question.

So far we have divided negative questions into three groups from the point of view of their answers:

1) questions with Tak+positive sentence and Nie+negative sentence answers — Pope's positive-negative question-answering system,
2) questions with Tak+negative sentence and Nie+positive sentence answers — Pope's agreement-disagreement question-answering system,
3) questions with either Tak+positive sentence and Nie+negative sentence or Tak+negative sentence and Nie+positive sentence answers — Pope's systems coexist here.

In the light of the above facts it seems impossible to formulate any rules for the Polish questions on the basis of syntactic facts alone, as Pope has done for English. In Pope's account, the choice of a No or Yes answer is dependent on the deep structure of the question or rather on the distinction between obligatory and optional negative placement rules. Since Polish lacks optional negative placement rules, the question-answering systems cannot be formulated in terms of such a distinction. Moreover, it seems that the terms: Agreement and Disagreement, if they are to be applied meaningfully to the analysis of Polish question-answering systems, are bound to mean somewhat more than just the negativity switch between the question and its answer. Agreement and disagreement are relative of the speaker and the hearer rather than of the question and its answer. One might argue that it is impossible to agree or disagree with a Yes-No question, however, if we assume that all questions either expect a "positive" or a "negative" response, which is the case even with the so-called neutral questions, then we may posit a rule of pragmatic implicature relating every question to the "invited" or "expected" answer. Hence, the hearer would confirm or deny the proposition implied pragmatically by the speaker. As to positive questions, they usually expect a positive answer, although the expectation is relatively weak when compared to that of negative questions. The latter are usually accompanied by a complex set of presuppositions, implications and expectations. It is difficult to say at the moment why some negative questions expect a positive response while other, which are very similar or identical in form, expect a negative answer. Too little attention has been devoted to the semantics and pragmatics of negative questions, for us to be able to solve that problem now. There is no doubt however, that better understanding of these issues is prerequisite to any conclusive account of the Polish question-answering systems.

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ENGLISH AND POLISH SINGULAR NOUNS AND ARTICLE USAGE IN ENGLISH [1]

JAMES T. CRITZ

University of Warsaw

One of the most difficult problems of English grammar faced by both teachers and learners of English is the use of the articles *the* and *a*. It is not the intention of this paper to present a complete contrastive analysis of English and Polish noun phrases and thereby provide a guide to the use of articles in English, but it is hoped that some of the fog covering the issue can be cleared and a better perspective taken on it. In particular, it is felt that the traditional notions of definiteness, genericness and specificity frequently used to describe the occurrence of English articles are inadequate because they ignore a more basic distinction between those situations where articles are used in general and where they are not and pay little attention to contextual and conventional determinants — not always the same for each language — which enable the interpretation of noun phrases in terms of these notions.

Because the most obvious distinction between English and Polish noun phrases is the fact that English is able to mark nouns which are uninflected for plural with the article *a*, while Polish has no equivalent overt marker for the semantic interpretations English associates with the presence or absence of this article, this paper will be primarily concerned with this distinction. Data from English and Polish shows that a general distinction between quantitative and non-quantitative interpretations of noun reference is relevant to both languages and that the use of articles in English is restricted to instances where quantitative presuppositions exist which involve reference to a single set or subset as a whole unit. The main concern of the paper is to point out various linguistic and non-linguistic factors involved in the choice of the use of the article *a* in English.

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[1] This paper is a revision of one given at the 15th International Conference on Contrastive English-Polish Studies, May 10—13, 1978 at Tleń, Poland. I wish to express my gratitude to my many Polish informants, in particular to Dr. W. Furmańczyk and Dr. J. Welna. Any shortcomings of the paper are my own.

The notion of "mass noun", whether with reference to English or Polish, is applied to nouns like *fowl, pollution, majoram, beton* "concrete", *mięso* "meat" and *chrzan* "horseradish", where reference to some generic object which is not normally segmented — often is treated as being incapable of segmentation — into individual subcomponents of the same generic type is involved. While the use of the word "mass" is questionable when objects of a more abstract nature are involved as referents - e.g. *pride, intelligence, acting, pomoc* "help", *wolność* "freedom", *sprawiedliwość* "justice", similar semantic and morphological conditioning occurs with these words as well: in most contexts both groups fail to form plurals or be subdivided.

1) *a fowl *fowls
*an intelligence *intelligences
*jedna krew "one blood" *krwi "bloods"
*jedna wolność "one freedom" *wolności "freedoms"

Apart from these examples one finds a large number of words which readily appear as both mass and count nouns:

2a) Harry prefers to eat salmon.
b) All salmons swim to their spawning grounds during the spring.
3a) Rainfall is crucial to the life of a forest.
b) Constant rainfalls get Sandy down.
4a) Wódkę robi się zwykle z kartofli.
vodka-acc. makes itself usually from potatoes.
Vodka is usually made from potatoes.
b) Trzy wódki dziennie to za mało dla lingwisty.
three vodkas daily that as little for linguists.
Three vodkas a day is too little for linguists.
5a) Jemy $\begin{Bmatrix}\text{zupę}\\ \text{zupy}\end{Bmatrix}$ przy każdym obiedzie.
We eat $\begin{Bmatrix}\text{(soup}\\ \text{soups}\end{Bmatrix}$ with every lunch.
b) W sklepie są różne zupy.
in store are various soups.
In the store there are various soups.

In spite of the apparent unacceptability of the forms in (1), count forms for these words usually can be produced easily and regularly by native speakers and, with a bit of imagination, even a variety of contexts found where these forms will be logically acceptable but perhaps contrary to normal usage. There is no logical reason, for instance, why the principle which allows one to use *salmons* with the interpretation species of salmon should not be extended to allow *fowls* with a parallel interpretation. This indicates that restrictions on the use of these words are not due to general properties of the grammars of English and Polish — unless semantic classification and/or syntax is the determinant — as is the case in (6 and 7) — but rather to linguistic conventions applying to particular words.

6a) Bret rode (*a) shotgun on the Sacramento route.
 b) Mary likes (*a) variety in her life.
7a) Według informacji jaką otrzymałem od nauczyciela języka polskiego, Polska posiada silnie rozwinięty przemysł chemiczny.
according-to information such-as I-received from teacher of-language Polish, Poland has strongly developing industry chemical
According to information I obtained from my Polish teacher, Poland has a strongly developing chemical industry.
 b) Jeszcze jedna informacja o tym jest mi potrzebna.
still one information about it is for-me needed
I need still one more bit of information.

In the following we will present a general discussion, without detailed proofs, of the concept underlying the notions "mass" and "count" and define the various factors involved in the interpretation of nouns with respect to these notions.

For both English and Polish we will generalize conditioning factors on the use and the interpretation of singular nouns to two types: textual environment and convention. Each of these types should be considered as covering both linguistic and non-linguistic factors. Thus textual environment includes not only the syntax and semantics of a given sentence or text but also that kind of experience which enables us to infer that two different event-sites are involved in (8a), but not necessarily in (8b); and convention refers not only to language specific phenomena but to psychological and behavioral patterns that may be involved in the use and interpretation of words, sentences and texts in a given language. First we will be primarily interested in linguistic factors, but later the non-linguistic factors will be outlined and related to the linguistic ones.

8a) John broke his leg and went to the hospital.
 b) We went to the park and had something to eat.

CONTEXT: For the moment, consider (9 and 10), where Polish, in contrast to English, shows a great dependence on broad contextual reference in order to assign interpretations of reference to singular noun forms. In (9b) the word *obrona* "defense" has a general "mass" sense; in (9c) it

9a) Grażyna sformułowała trzy argumenty w obronie słusznej krytyki.

Grażyna formulated three arguments $\left\{\begin{array}{l}\text{in defense}\\ \text{her defense}\end{array}\right\}$ of proper criticism.

b) Mamy trzy argumenty w obronie słusznej krytyki wysunięte przez Grażynę.
we-have three arguments in defense of-proper criticism proposed-acc. by Grażyna
We have three arguments proposed by Grażyna in defense of proper criticism.

c) Znalazłem tylko trzy argumenty popierające sformułowaną przez Grażynę obronę słusznej krytyki.
I-found only three arguments supporting formulated-acc. by Grażyna defense of-proper criticism
I found only three arguments supporting the defense of proper criticism formulated by Grażyna.

10a) Na obrazku widać kobietę przy montażu nowego samochodu, przeznaczonego do sprzedaży tylko w dwunastu sklepach.
in picture to-see woman-acc. at assembly of-new automobile,marked into sale only in twelve stores
In the picture one can see a woman assembling a new automobile, marked for sale in only twelve stores.

b) Na obrazku widać kobietę przy montażu nowego samochodu, przeznaczonego tylko dla Janka, który chce w nim startować w niedzielnym rajdzie.
in picture to-see woman-acc. at assembly of-new automobile, marked only for John, who wants in it to-start in Sunday-adj. race.
In the picture one can see a woman assembling a new automobile, being made only for John, who wants to begin Sunday's race in it.

c) Na obrazku widać kobietę przy montażu nowego samochodu, którego kupnem interesuje się tylko dwunastu osób.
in picture to-see woman-acc. at assembly of-new automobile, of-which purchase-instr. interests itself only of-twelve persons.
In the picture one can see a woman assembling a new automobile which only twelre people are interested in buying.

involves reference to a specific defense given by Grażyna; and in (9a) the word is ambiguous between both these interpretations. It is important to note that the readings in (b and c) are required by the context given in these sentences and that (9a) is ambiguous because the context provided is not sufficient enough to clarify the situation in favor of one reference over the other. (10) provides a similar set of examples, where relevant information allowing one to infer the correct reference is contained in a relative clause following the referential noun. Both sets of examples illustrate how contexts may impose semantic restrictions and that either preceding or subsequent context, or both, may be relevant to the determination of mass or count reference. While the word *montaż* "assembly" in (10) may have a preferred reading associated with mass assembly and which should establish a preference for a mass reading of *samochód* "automobile", its presence in (10b) does not logically exclude an interpretation involving the construction of a single automobile.

The semantic conditioning involved in (9 and 10) is similar to that which also does not allow for a mass interpretation of *koszt* "cost" in the phrase *koszt budowy taśmociągu* (the) cost of (the) construction of (a) conveyer-belt; in this phrase, as with the preceding sentences, lexical definitions and the syntactic dependencies of the lexical items can be said to be the sole determinants of the implication that only one total cost is involved.

There are other instances, however, where semantic information is used which is not drawn from possibilities offered within the lexicon and grammar but rather from a speaker or hearer's personal experience of the world. One such sentence is (11), which in correspondence with (12) is linguistically capable of referring to a single bowl of soup but which experience tells us must require a mass reading for *zupa* "soup". It is not immediately obvious whether experience such as that which gives us our reading of (11) should be treated as extralinguistic semantic context or as a matter

11) Zofia je zupę codziennie.
    Zofia eats soup daily.
12) Zofia czyta książkę codziennie.
    Zofia reads (the/a) book daily.

of non-linguistic behavioral convention which tends to exclude certain logically possible readings allowed by the combined linguistic and non-linguistic context. While it can be argued that convention is a type of context, this article will assume that a distinction between the two can be made to the effect that convention does not always act as a base to which rules of interpretation refer but rather determines or predisposes the orientation of the interpretive process with respect to any given context. Placing (12) in different contexts, just as with the examples of *obrona* and *samochód* above, allows one to disambiguate mass and count readings of *książka*, thus reflecting the occurrence of purely contextual determination. (11), on the other hand, should be expected to maintain one preferred reading in most contexts, reflecting conventional determination in the interpretation of this sentence. This latter point will become clearer in the discussion of convention below.

Considering only linguistic context for the moment, the above considerations indicate that, for Polish at least, interpretations of mass and count reference should not be attributed to the use of specific features marking nouns as to mass or count reference and, by extension, as to readings of definiteness, specificity and genericness, in the same way as one normally states the lexical properties of words by [±animate], [±human], etc. Rather late rules of semantic interpretation may determine these readings solely on the basis of context. Moreover, the fact that these features can be interpreted from context shows that they are of a different nature than features like [± animate], which are intrinsic to the lexical meaning of words.

The semantic restrictions which define the reference of a given singular noun may be broadly described as consisting of the logical relations holding between the lexical definitions of the words of a given text and the logical implications derived from these when viewed with respect to their syntactically defined dependencies on each other.

While limited space precludes the presentation of a full argument in this paper, an extensive examination of data similar to that given above indicates that unless specific quantifiers or deteminant articles (*ten*, *ta*, *to*), pronouns (*jego* "his", *swój* "one's own", etc. - cf. (13)) or some adjectives (e.g. *każdy* "each", *ostatni* "last") and comparative forms appear in surface structure noun phrases with a noun, the interpretations of a given singular noun in Polish as mass or count is a reflection of its broad context, linguistic and non-linguistic. If quantifiers, articles, etc. are also treated as contextual determinants of the interpretation of these features, then a general claim can be made for both Polish and English that no noun or noun phrase is marked for these features in deep structure; rather readings of a noun as mass, count, generic, specific or definite are assigned by a late rule of semantic interpretation which looks at quantifiers in the immediate context of a noun in the same way as it relates the more general context to the noun. A further claim will be made here that singular noun forms in both Polish and English are intrinsically non-quantitative in reference at the level of deep structure: they do not even refer to a class of objects as a unit set but rather denote only the qualitative attributes the potential objects of a speaker's reference share. Because so-called mass or generic interpretations of singular nouns are really instances where no quantitative association is attributed to a singular noun in a given context, the semantic interpretation process claimed here to be the source of a mass or count reference of a noun is the non-assignment or assignment, respectively, of a feature rather than a choice between two alternative features.

13a) Janina napisała wszystkie listy piórem. SPECIFIC/NON-
Janina wrote all letters pen-instr. SPECIFIC
Janina wrote all letters with a pen.
b) Janina napisała wszystkie listy moim czerwonym piórem. SPECIFIC

Janina wrote all letters my-instr. red pen
Janina wrote all letters with my red pen.

On the basis of the foregoing the rest of this paper will avoid further use of the terms "mass" and "count", prefering instead the distinction "non-quantitative" and "quantitative".[2] While support for the claim that mass interpretations are really non-quantitative readings and that the non-quantitative reading reflects the more basic form of the noun in deep structure is easier to find in English (see below.), the Polish examples in (14 and 15) require reference to non-quantitative singular noun forms for semantic continuity to hold between *jedna* and *która* and their antecedents.

14) Bogdan chce łapać $\left\{\begin{matrix}\text{ryby}\\ \text{rybę}\end{matrix}\right\}$, i w mojej sadzawce jest jedna.
Bogdan wants to-catch $\left\{\begin{matrix}\text{fish-pl.}\\ \text{fish-sg.}\end{matrix}\right\}$, and in my pond is one
Bogdan wants to catch $\left\{\begin{matrix}\text{fish}\\ \text{a fish}\end{matrix}\right\}$ and there is one in my pond.

15) Jan dał matce różę, która jest najbardziej odpowiednim kwiatem dla kobiety.
Jan gave to-mother rose, which is most proper flower for women
Jan gave his mother a rose, which is the most proper flower to give a woman.

Like Polish, English also makes a basic distinction between the interpretation of nouns as quantitative and non-quantitative in reference. With respect to singular noun phrases and unlike Polish English usually marks this distinction by the presence or absence of the article *a*. (Quantification can also be marked by the presence of quantifiers like *any*, *each*, *every*, etc., but this will not be discussed here. Where *the*, *this*, possessive pronouns, *et al.* indicate the presence of a quantitative presupposition, they do not do so directly, since they involve an additional presupposition that the quantity of referents constitutes one whole set which is qualitatively distinct from other possible referents. (See summary of uses of *the* at end of paper.) This matter, which also holds for Polish, should also be kept in mind and provides justification for the above claimed priority of *a*. Specific arguments on this also will not be given here.)

The existence of a distinction between quantitative and non-quantitative reference in English can be demonstrated by examples parallel to (14 and 15) and by examining the "abbreviated" style of English which appears in news headlines, captions, telegrams, some types of summaries and business and legal short form cf. (16) and (17), for which noun reference is interpreted much as it is in Polish.

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[2] This framework will also treat plural inflections as contextual determinants rather than mark nouns so inflected as quantitative in deep structure. Footnote 3 is also relevant to this.

16) Mouse trains cat to jump fence. Latter collapses on fiftieth try.
17) Signature on document enclosed will complete contract.

Also, in contrast with Polish, English shows a great deal of freedom in its ability to use singular noun forms in the formation of compound nouns (*sandstone*, *bullfrog*) and to function as adjectival modifiers (*red leather bag*, *auto club*, *hall flower arrangement*). When participating in these ways the singular noun form is normally unattached to any notion of quantity. It is important to note, however, that just as broad context in Polish is able to restrict the possible reference of a noun to one which involves the notion of quantity, English nouns functioning like adjectival modifiers and unmarked by the presence of *a* may be restricted as to reference by context. It is not difficult, for instance, to imagine situations for which *club* and *hall* in *auto club hall flower arrangement* may be so interpreted.[3] The predominance of non-quantitative reference in nouns appearing in compounds and functioning as adjectives and their dependence on context, sometimes far removed from the phrase itself in which the noun occurs, are indications that for English also deep structure nouns are not marked for quantitative reference but that this is rather interpreted by a late process relating a noun to linguistic and non-linguistic environment. Where this process differs from that in Polish is the fact that English normally requires the placement of a determinant *a* in the immediate environment of a singular noun which the speaker presupposes to have quantitative reference and which does not function as an attributive qualifier of a subsequent noun within the same noun phrase. As a result, when the interpretation rule considers the broader context, it does so more as a filter, confirming the semantic cohesiveness of the sentence. While the process in Polish may also be thought of as a filtering device, it appears to be clearly more dynamic than it is in English.

CONVENTION: The conventions which function as determinants of the interpretation of quantitative reference are either linguistic or extra-linguistic conditions imposed on the use of a word. The linguistic conventions involved here tend to be language specific and restrict the readings of contexts in which words may appear to less than those which are logically, syntactically or morphologically possible. Extra-linguistic conventions are primarily matters of conditioning of interpretations on the basis of personal experience or on the basis of perceptual strategies and similarly restrict contexts and possible interpretations.

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[3] Presumably this also happens for Polish adjectives based on noun roots, but the phenomena there is not as general in as English. It is hard to imagine how a context would restrict *koński* to a quantitative reference involving one horse — cf. *końskie mięso* "horse-adj. meat" but easier for *klubowy* "club". This leads to interesting problems in the construction of lexicons.

In order to illustrate extra-linguistic conventional conditioning, let us return to (10a). It turns out that this sentence does have an interpretation where *samochód* refers to a single automobile (cf. (18)). The difficulty one encounters in obtaining this reading on first seeing (10a) is due to a general psychological process, called a perceptual strategy, by which persons tend to interpret any situation they encounter in the simplest way possible and within the most minimal framework the context will allow. Only if this minimal interpretation fails when applied to the larger context is the first interpretation revised or discarded. (Cf. T. Bever (1970) and A. Newell and H. Simon (1972) for a more detailed description of strategies.) Strategies are matters of convention. In addition to them a person's own familiar associations with the object of reference work to provide a contextual base which general strategies draw on when determining preferred readings. To the extent that these associations function as a base for the strategy they also constitute convention.

18) Na obrazku widać kobietę przy montażu nowego samochodu, przeznaczonego tylko dla dwunastu sklepów. Przed wprowadzeniem go do sprzedaży, prototypowy samochód będzie demonstrowany po kolei w każdym sklepie przez trzy godziny.
In the picture one can see a woman assembling a new automobile marked (for sale in) only twelve stores. Before being placed on sale this prototype automobile will be demonstrated in each store, one after the other, for three hours.

Some evidence given below indicates that language accomodates its use of words to conform to the preferences established by perceptual strategies.

Any noun in English or Polish is theoretically capable of both quantitative and non-quantitative reference. However, both languages not only make use of the fact that some words, mainly because of the nature of the object they refer to, appear so frequently in life situations requiring one type of reference that in order to avoid possible confusion where the opposite reading is required, they prefer to restrict the use of some nouns exclusively, or primarily, to one context. This does not result in a strict division between quantitative and non-quantitative nouns but rather a continuum, with abstract nouns like *wolność* "freedom", *zdrowie* "health", *malarstwo* "painting", etc. and concrete mass nouns like *drób* "poultry" and *beton* "concrete" at one end, nouns which are always quantitative — *szachy* pl. "chess", *warcaby* pl. "draughtsman" — at the other and the bulk of the language's vocabulary falling at various points in between (cf. (19—21)), where *zupa* shows quite a bit of freedom in being able to appear with either quantitative or non-quantitative reference in contrast to the more limited flexibility of *beton* and *jabłko*).

19) Jemy $\left\{\begin{array}{l}\text{zupę}\\ \text{zupy}\end{array}\right\}$ przy każdym obiedzie.
We eat $\left\{\begin{array}{l}\text{soup}\\ \text{soups}\end{array}\right\}$ with every lunch.

20) Jeden rodzaj betonu używa się do budowy gmachów, a drugi do zaprawy. Oba $\left\{\begin{array}{c}\text{rodzaje betonu}\\ \text{?*betony}\end{array}\right\}$ są produkowane przez tę fabrykę.
one type of-cement uses itself into construction of-buildings, and second into mortar. Both $\left\{\begin{array}{c}\text{types of concrete}\\ \text{?*concretes}\end{array}\right\}$ are produced by this factory.
One type of concrete is used for the construction of buildings and the other for mortar. Both $\left\{\begin{array}{c}\text{types of concrete}\\ \text{concretes}\end{array}\right\}$ are produced by this factory.

21a) (Preferred) Zielone jabłka lepiej się gotują niż czerwone.
green apples better themselves prepare than red
Green apples are better for cooking than red.
b) Zielone jabłko lepiej się gotuje niż czerwone.
green apple better itself prepares than red
A green apple is better for cooking than a red one.

These examples, as with (11), may be treated as instances of purely linguistic convention, but in general they can often be related to extra-linguistic associations and conventions of behavior. The clearest examples of pure linguistic convention seems to be the restricted quantitative form of nouns like *szachy* (pl.) "chess", *warcaby* (pl.) "draughtsman", other *pluralia tanta* and contextual restrictions like that on the following example: The expression *mieć dobre serce* "to have (a) good heart" is semantically capable of reference to one's healthy heart, yet Polish associates the abstract meaning of *serce* so closely with this expression that interference from this association creates a strong preference for the abstract sense in (22a), where physical reference is also logically possible, and the near exclusion of *dobre* in (22b), (22c); uttered with reference to a sportsman, shows that *dobre* may be used with the meaning "in good condition" or "healthy" in other contexts.

22a) Chcemy, żeby ludzie, którzy mają dobre serce, pracowali u nas.
we-desire, that-be (conditional) people, who have good heart, work at us
We desire that people who have (a) good heart work with us.
b) Kiedy chce się dużo ćwiczyć, ważnym jest, żeby mieć $\left\{\begin{array}{l}\text{?*dobre}\\ \text{zdrowe}\end{array}\right\}$ serce.

when it-wants itself a-lot to-exercise, important is, that-be (conditional) to-have $\left\{\begin{matrix}\text{?*good}\\ \text{healthy}\end{matrix}\right\}$ heart

If one wants to exercise a lot, it is important to have a $\left\{\begin{matrix}\text{?*good}\\ \text{healthy}\end{matrix}\right\}$ heart.

c) Jego lewa noga nie jest tak dobre jak dawniej.
his left leg not is so good as before
His left leg is not as good as it used to be.

The foregoing distinctions between contexts and conventions and between quantitative and non-quantitative references of nouns also holds for English, although the specific ways in which syntax, semantics, extra-linguistic context and conventions restrict the interpretation and use of nouns are not always identical for each language. Divergencies in this respect will not be discussed here but should be obvious if one compares the Polish and English sentences given as examples in this paper.

CONTRAST AND QUANTITATIVE REFERENCE. In general non-quantitative nouns are inherently semantically contrastive — in the sense that they refer to one class of attributes (and only indirectly the objects sharing those attributes) and assert this reference against the background of other possible classes of attributes (and objects). How severe the contrast of classes is depends on the range of possible referent classes allowed by the context in which the noun is uttered. In (23), for instance, the range within which *pociąg* "train" is contrasted is limited to modes of transportation; in (24), where an overt contrast of *student* "student" and *nauczyciel* "teacher" occurs the range is much more limited: two classes, provided the context outside of (24) does not require an expansion of the context to include rector, administrators, *et al*. The English examples parallel those in Polish. The observation of this phenomenon is important, because class

23) Chcemy jechać pociągiem.
we-want to-go train(instr.)
24) We want to go by train.
25) To sprawozdanie jest ważne zarówno dla studenta jak i nauczyciela.
that report is important equally for student as also teacher
26) The report is equally important for both student and teacher.

semantic contrasts of this sort are weakened and are less dynamic in quantitative interpretations, where they share equal weight with numerical contrasts (one or several objects against an indefinite quantity). A consequence of this finds expression in the conventional preferences of English and Polish: unless the given context defines a limited range of contrast, quantitative referential uses of nouns are preferred. Conversely, the more apparent a contrastive context is, the more likely it is that an unmarked, non-quantitative noun may be used. The obvious exceptions to this are where other linguistic conventions intervene — as where a noun is normally associated with a non-quantitative reading and has no plural form (cf. (1)) and where, especially for Polish, no non-quantitative equivalent is used (*warcaby* (pl.) "draughtsman", *spodnie* (pl.) "pants", etc.) or other forms of expression are preferred — (*dużo ptaka* ⇒ *dużo ptactwa* "a lot of bird"; *mięso z konia* ⇒ *końskie mięso*)). Where context allows an apparent choice between non-quantitative and quantitative forms (e.g. generic unmarked singular (*dużo jajka*) v.s. generic plural (*dużo jajek*)), preference normally falls to the latter, apparently because language tends to preserve non-quantitative use for contrast. It is this phenomenon which explains the unacceptability of the nonquantitative singular noun in the English examples (27a) and (28a) and their acceptability in the (b) versions even where specific objects may be known to be referred to.

27a) We have taken $\left\{\begin{array}{l}\text{a train}\\ \text{* train}\end{array}\right\}$ most of the time we have travelled.

b) We have taken train and bus (both) most of the time we have travelled.

28a) $\left\{\begin{array}{l}\text{* Bird}\\ \text{A bird}\\ \text{Birds}\end{array}\right\}$ attacked Clair when she was jogging through the marsh.

b) $\left\{\begin{array}{l}\text{Bird and gnat}\\ \text{A bird and a gnat}\\ \text{Birds and gnats}\end{array}\right\}$ attacked Clair when she was jogging through the marsh.

While this hypothesis seems to hold generally, it needs a great deal of refinement and testing before it can be applied to a thorough analysis of English and Polish with the ultimate aim of teaching the use of articles in English. In particular, those contexts which are considered by each language to be contrastive environments which are limited enough to allow for the use of non-quantitative singular noun forms are not always the same and need to be defined.

Three instances where Polish uses the instrumental case, for example, provide a limited enough range for the occurrence of non-quantitative interpretations of the instrumental noun (29 — 31), but English allows unmarked singular nouns in only one of these, unless the context is restricted even more, as in (32). (32b) shows that the use of a different preposition, one which has a much more limited function as an instrumental marker, may narrow the context sufficiently, just as the overt mentioning of two classes does.

29a) Bogdan studiuje, żeby zostać adwokatem.
Bogdan is-studying, that-be (conditional) become lawyer-instr.
b) Bogdan is studying to be $\left\{\begin{array}{l}\text{a lawyer}\\ \text{* lawyer}\end{array}\right\}$.
30a) Tomasz jest jakby doktorem dla nas wszystkich w biurze.
Thomas is as-be (conditional) doctor-instr. for us all in office
b) Thomas is doctor to all of us at the office.
31a) Olga napisała wszystkie listy piórem.
Olga wrote all letters pen-instr.
b) Olga wrote all her letters with $\left\{\begin{array}{l}\text{* pen}\\ \text{a pen}\end{array}\right\}$.
32a) Olga wrote all her letters with pen and ink.
b) Olga wrote all her letters in pen.

Two other contexts reflecting differences between English and Polish are given in (33 and 34). In these sentences Polish *gwiazda* "star" and *sauna* "sauna" may have non-quantitative, generic readings, yet English requires the presence of the quantifier *a*. In (33) only the plural can be used to achieve a generic reading. Note again, however, that overt contrast in English does allow for non-quantitative singulars:

33a) $\left\{\begin{array}{l}\text{Gwiazda daje}\\ \text{Gwiazdy dają}\end{array}\right\}$ nam nocą światło.
$\left\{\begin{array}{l}\text{star gives}\\ \text{stars give}\end{array}\right\}$ us night-instr. light
b) $\left\{\begin{array}{l}\left.\begin{array}{l}\text{* Star}\\ \text{A star}\end{array}\right\}\text{ gives}\\ \text{Stars give}\end{array}\right\}$ us light at night.
34a) Będąc w saunie, ważnym jest, żeby (się) odprężyć. being in sauna, important-instr. is, that-be (condit.) (Pro-reflexive) relax (infin.)
b) When one is in $\left\{\begin{array}{l}\text{* sauna}\\ \text{a sauna}\end{array}\right\}$, it is important to relax.
35a) Both star and apple falls, but one falls from the heavens, the other from a tree.
b) Whether in sauna or out of sauna, it's important to relax.

While the difference in (33) may be partly due to differences in the ability of subject noun phrases in general in each language to take non-quantitative readings, although normally both prefer to assign sentence initial nouns quantitative references. Note that the plural forms are preferred in (33) for both languages, conventional associations peculiar to the nouns involved must be taken here as the primary factor limiting the acceptability of non-quantitative reference in English. This is indicated by (36), when compared with (33b), and, especially, by (37), where it is shown that within the

(36) Pudding gives us refreshment at night.

37a) Będąc w
łóżku
* łóżkach
miłosnym uścisku
miłosnych uściskach
kłopocie
kłopotach
* trudności
trudnościach
, ważnym jest,
żeby (się) odprężyć.

being in
bed
* beds
loving embrace
loving embraces
trouble
troubles
* difficulty
difficulties
, important (instr.) is
that-be (condit.) Pro-reflexive relax

b) It's important to relax when in
* beds
bed
? a bed
a loving embrace
loving embraces
loving embrace
trouble
* troubles
* a trouble
difficulty
* difficulties
? a difficulty
.

same context different words reflect varying degrees of preference as to which forms (unmarked singular, marked singular or plural) can be used to communicate a generic reading. (In the English examples of (37b) it should be noted that when no additional context is given which might require quantitative reference, given a choice between plural quantitative and singular non-quantitative nouns, speakers lean towards the singular form. This particular preference is due to semantic and syntactic contextual properties rather than to convention.) While *sauna* shows a generally more restricted ability to appear without a quantitative determinant in (34), where it is compared with words from different semantic classes, with respect to words of the same semantic type it also holds a relative position: in (38) it appears to be less restricted than other words similar in meaning, indicating that convention is indeed involved.

38) Even $\left[\begin{array}{l}\left\{\begin{array}{l}\text{sauna}\\ \text{a sauna}\end{array}\right\}\\ \left\{\begin{array}{l}\text{* bath}\\ \text{a bath}\end{array}\right\}\\ \left\{\begin{array}{l}\text{* hot house}\\ \text{a hot house}\end{array}\right\}\end{array}\right]$ has bad points as well as good.

Since it was claimed earlier that semantic contrast is important to the acceptability of non-quantitative readings, it should be shown that it is a degree of contrastive difference that accounts for the appearance of undetermined *sauna* in (38) versus its quantification in (34), so that it cannot be concluded that convention alone is what determines the difference here. Evidence for this is obtained by noting that under normal intonation greater assertive value is given to final constituents in phrases, clauses and sentences, so that if the noun phrase containing non-quantified *bed*, *embrace*, etc. is expanded to include a subsequent prepositional phrase, the noun within the prepositional phrase should shift the burden of contrast from *bed*, etc. to itself and require quantification of the earlier noun. (39) shows this to be in fact the case.

39) It's important to relax in $\left\{\begin{array}{l}\text{* bed}\\ \text{a bed}\end{array}\right\}$ of daisies.

It would be good at this point to state explicitly all the factors involved in the determination of whether the interpretation and/or use of a non-quantitative noun is acceptable or not. Summarizing those factors discussed to some extent above, we find four: first is the ability of singular noun forms to take generic interpretations — an ability they have due to the fact that quantitative interpretations of these forms are not intrinsic to them; second is that the conventions of Polish and English and the non-linguistic conventions of behavior and association speakers of these languages bear allow a particular form (e.g. *gwiazda* or *star*) to appear and for it to be interpreted as non-quantitative; third is the degree of contrast (specifically, class contrast as defined by atribute) associated with this noun by its syntactic position in the sentence and its semantic content; and fourth, the fact that everyone operates on a basic, non-linguistic perceptual strategy that, as defined above, assumes that the information obtained in a given perception is perceived in terms of one's familiar experience and associations and then generalizes the information so interpreted to as broad a scope as possible. The last conditioning factor is fundamentally different from the other three, if only for the reason that the effect of the first three is absolute: they establish specific sets of possibities of language use and interpretation, while strategies represent preferences only.

(A parallel distinction is required between conventions which determine choices in an absolute way — defining grammaticality on the linguistic level — and those which may be broadly described as stylistic.) One's familiar associations with words and the general linguistic and non-linguistic contexts in which they are normally used may place limiting factors on the generalization of noun interpretations and uses. At the very least they do so by preferring a restricted, quantitative reading in sentences like (40), while allowing the non-quantitative reading as an unlikely option until further context

40) Jabłko spada z drzewa.
apple falls from tree
{An apple is falling from a tree.
? * Apple {is falling / falls} from a tree.}

necessitates a definite choice for one interpretation and the exclusion of the other. The linguistic (or non-linguistic) conventional restriction of words to different degrees of attachment to exclusive quantitative or non-quantitative usage discussed above may overlap or coincide with those restrictions created by familiar associations (i.e., by one's active knowledge of the world and of the categories used by one's language and culture). But this conventional restriction is considered to be essentially different in that the associations people have in common due to their living in modern industrial societies or due to universal characteristics of man are not parallelly reflected by identical linguistic conventions in their respective languages in an absolute manner. While all persons supposedly would know that apples normally appear in quantities and are countable, individual objects, it does not necessarily follow that all languages should include quantitative reference in their definition and/or marking of the word for apple.

(To clarify these ideas, it should be noted that these notions differ from Whorf's hypothesis about the relations holding between language, culture and the world. For Whorf the categories and associations provided by language largely define what familiar associations a person has ("linguistic determinism"). Categories and associations are static until the word is assigned a new meaning through (gradual) linguistic change. In this paper multiple associations, derived from experiencing many different aspects of an object in many different contexts, linguistic and non-linguistic, hold for both the object and the word. Except where restricted by convention, the meaning of a word, its categories and their hierarchical arrangement, is not static but is dynamically related to the context at any given moment. A constant set of associations is involved in all uses of a word, but the particular reference of a word in a given context is not to the total set of associations but to one of many potentially salient arrangements of associations. For Whorf the total constant set is always referenced; while some associations are more salient than others, salient ones remain salient and the hierarchical relation holding between associations is constant and independent of context.)

The relationship holding between associations and perceptual strategies is that perceptual strategies are limited by associations and select preferred interpretations from among those interpretations which are logically possible within the grammar of the language. The preferred interpretation always stands the chance of being the wrong one, but for the limited context on which the strategy operated it is always acceptable.

Strategies, when examined with respect to their role in assigning interpretations, are dependent on linguistic (and nonlinguistic) conventions and therefore cannot violate them. A speaker, in using a language, is aware of the fact that the hearer uses perceptual strategies for interpretation and also associates certain contexts and words with preferred or, in some instances, exclusive readings. Because of this, the speaker may choose to take advantage of these associations by using noun forms whose associations will provide a more explicit track for the strategy of the hearer to follow in interpreting. Therefore, if a generic interpretation is desired for *jablko* 'apple' in (40), the speaker will prefer the quantitative, plural form *jablka* in concession to those conventions and associations which limit the non-quantitative interpretation of *jablko* here. In some situations linguistic convention and linguistic context may not leave the speaker any choice: the selection of a logical possibility other than that allowed by the type of linguistic convention discussed so far — such as the use of *in sauna* in (34b) — is ungrammatical. Not considered in our discussion is that area where language applies restrictions to syntactically and semantically possible constructions in particular contexts rather than to the language as a whole — the area of style.

To return to the interpretation of *gwiazda* 'star' in (33): the third and fourth conditions mentioned above as relevant to the acceptability of a non-quantitative interpretation, i.e. degree of contrast and perceptual strategy limited by familiar experience — are to some extent interdependent. This is evident when (33) is compared with (41), where a non-quantitative reading is also applicable to *gwiazda* but much less acceptable. The contrastive framework of (41b) improves the situation, but not to such an extent that a speaker would assign equal acceptability to the use of the singular noun form along with the plural form when a generic interpretation is desired. The reaction of Polish speakers, when asked to account for the variations in the acceptability of such sentences compared with others is that, however one may describe familiar experience, stars and their properties are not as familiar an experience as are dogs, horses and even elephants. These latter are definitely capable of nonquantitative interpretation in sentences like (42 and 43).

41a) Gwiazda spada z nieba.
star falls from sky
Preferred: Gwiazdy spadają z nieba.
stars fall from sky
A star falls from the sky.
b) Zarówno gwiazda jak i jabłko spadają, tylko że
jedno z nieba a drugie z drzewa.
equally star as and apple fall, only that
one from sky and other from tree
Both star and apple fall, only one from the sky
and the other from trees.
42) Pies i koń są wiernymi przyjaciółmi człowieka.
dog and horse are true friends of-man
Dog and horse are true friends of man.
43) Słoń żyje w Afryce.
elephant lives in Africa
The elephant lives in Africa.

Speakers here do not distinguish between familiarity due to personal encounters (of the third kind) with the objects referred to and more frequent experience with linguistic contexts where, due to either semantic and/or syntactic peculiarities of the contexts where stars are mentioned or conventions which hold *gwiazda* more closely bound to quantitative usage than they do for *słoń* "elephant", *pies* "dog", etc., but frequency of encounter, both linguistic and non-linguistic, is felt to condition one's ability to interpret singular forms non-quantitatively. In addition some of the above example have shown that a more obvious degree of semantic contrast loosens the restrictions imposed by familiar experience and enables one to generalize the interpretation of reference to the general non-quantitative scope the singular form inherently bears.

The interdependence of perceptual strategy and contrastive context can also be seen in another way. Primarily due to work initiated by the Prague School, the interdependence of a word's position with respect to a sentence's syntax and word order and its ability to convey assertion has long been noted. On the basis of such studies it should be expected that singular nouns in near sentence final position should show a greater tendency to take on non-quantitative interpretations than those in sentence initial position. One parallel bit of evidence, though on the phrase level, was given above (i.e. (39)). On the sentence level it is brought out by the obvious class-contrastive nature of *list* "letter" in (44a) in comparison with (44b). One would expect that if singular noun forms are basically non-quantitative and sentence final positions are generally class contrastive, this would lead to the general use of singular non-quantitative forms at the end of generic sentences like (45 and 46). Instead it seems that quantitative noun forms are strongly preferred in such sentences and non-quantitative forms considered ungrammatical. Even in (44a) speakers infer that despite class contrast *list* 'letter' also refers to only one letter, and the English equivalent (44c) requires the presence of the quantitative determiner *a*.

44a) Zdziwiłbym się, gdyby Bogdan mógł napisać list.
I would be surprised, when-be (condit.) Bogdan could write letter
b) Zdziwiłbym się, gdyby list mógł być napisany przez Bogdana.
I would be surprised, when-be (condit.) letter could be written by Bogdan.
c) I would be surprised if Bogdan could write a letter.
d) I would be surprised if $\left\{\begin{matrix}\text{(the)}\\ \text{a}\end{matrix}\right\}$ letter were written by Bogdan.

45a) Człowiek ma $\left\{\begin{matrix}\text{stopy (pl.)}\\ \text{? stopę (sg.)}\end{matrix}\right\}$ a jeż $\left\{\begin{matrix}\text{łapki (pl.)}\\ \text{? łapkę (sg.)}\end{matrix}\right\}$.
man has $\left\{\begin{matrix}\text{feet}\\ \text{foot}\end{matrix}\right\}$ and hedgehog $\left\{\begin{matrix}\text{paws}\\ \text{paw}\end{matrix}\right\}$
b) Man has $\left\{\begin{matrix}\text{feet}\\ \text{*foot}\\ \text{a foot}\end{matrix}\right\}$ and a hedgehog $\left\{\begin{matrix}\text{paws}\\ \text{*paw}\\ \text{a paw}\end{matrix}\right\}$.

46a) Kot je $\left\{\begin{matrix}\text{myszy}\\ \text{*mysz}\end{matrix}\right\}$.
cat eats $\left\{\begin{matrix}\text{mice}\\ \text{*mouse}\end{matrix}\right\}$.
b) A cat eats $\left\{\begin{matrix}\text{mice}\\ \text{*mouse}\\ \text{? a mouse}\end{matrix}\right\}$.

The possible reasons for this phenomenon will require thorough study if one wishes to provide a description of those situations where English articles are used or not used; but since (47 and 48) show that the words involved here are not subject to a general conventional restriction preventing the occurrence of their non-quantitative form, the reasons must be those related to semantic context and restrictions imposed by experience on the language's choice of forms in order to prevent possible confusion when a perceptual strategy is applied.

In particular, three associations, the first non-linguistic, the second two including both linguistic and non-linguistic experience, seem to be involved: a) the fact that, although a language allows for non-quantitative reference, the predicate attributes of a class are normally thought of in relation to concrete objects — the more closely the information in a sentence matches a person's experience of a large number of objects of the kind referred to by the noun phrase containing a singular noun form, the greater the preference for a non-quantitative interpretation. (49) shows that when a sentence contradicts one's general impression of cats and mice, quantitative reference is the most

47a) Jaką książkę chce Irena? (Książkę jakiego rodzaju chce?)
what-kind book wants Irena?
b) What kind of book does Irena want?
48a) Stopa i łapa są wariantami ewolucyjnymi.
foot and paw are variants evolutionary.
b) Foot and paw are evolutionary variants.
49a) Czarny kot nie je myszy.
black cat not eats mice
b) $\left\{\begin{array}{l}\text{*Black cat}\\ \text{A black cat}\end{array}\right\}$ doesn't eat mice.

likely interpretation. b) That of quantitative relations holding between objects of one class and those of another (e.g. the one-to-many relations existent in our knowledge that each man has two feet or a hedgehog four paws or that one cat is thought of as eating more than one mouse), and in contradiction to which a tendency to associate words as much as possible with actual objects could assign interpretations of one leg, one mouse, etc. to singular noun forms where vagueness of context or contrast allows for this. c) A tendency to preserve count reference once a context establishes it (cf. (50)). In (51), Polish's exclusion of **stado słonia* is dependent on a conventional restriction specific to words of the semantic type *stado* belongs to; a similar restriction in English accounts for the use of *daisies* in (39). Here language has adopted a preference for quantitative forms in order to provide better orientation for perceptual and interpretive processes. Polish is apparently more conservative than English in that it seems to prefer plural to singular noun forms and quantitative singular to non-quantitative singular interpretations in conformity with these associations more so than English.

50a) Słoń żyje w Afryce.... Tak, ale $\left\{\begin{array}{l}\text{słoń żyje}\\ \text{słonie żyją}\end{array}\right\}$ także w Indiach.
elephant lives in Africa.... yes, but
$\left\{\begin{array}{l}\text{elephant lives}\\ \text{elephants live}\end{array}\right\}$ also in India
b) $\left\{\begin{array}{l}\text{The}\\ \text{An}\end{array}\right\}$ elephant lives in Africa.... Yes, but
$\left\{\begin{array}{l}\left\{\begin{array}{l}\text{the}\\ \text{*an}\end{array}\right\}\text{ elephant lives}\\ \text{elephants live}\end{array}\right\}$ also in India.

c) Słonie żyją w Afryce.... Tak, ale $\left\{\begin{array}{l}\text{słonie żyją}\\ \text{? słoń żyje}\end{array}\right\}$ także w Indiach.
elephants live in Africa.... yes, but
$\left\{\begin{array}{l}\text{elephants live}\\ \text{? elephant lives}\end{array}\right\}$ also in India

d) Elephants live in Africa.... Yes, but
$\left\{\begin{array}{l}\text{elephants live}\\ \text{?? the elephant}\\ \text{*an elephant}\end{array}\right\}$ lives also in India.

51a) Czy widziałeś $\left\{\begin{array}{l}\text{słonie}\\ \text{słonia}\end{array}\right\}$ w ogrodzie zoologicznym?
Tak, widziałem całe stado $\left\{\begin{array}{l}\text{słoni}\\ \text{*słonia}\end{array}\right\}$.
whether you-saw $\left\{\begin{array}{l}\text{elephants}\\ \text{elephant}\end{array}\right\}$ in garden zoological?
yes, I-saw whole herd of $\left\{\begin{array}{l}\text{elephants}\\ \text{*elephant}\end{array}\right\}$

b) Did you see $\left\{\begin{array}{l}\text{elephants}\\ \text{(the) elephant}\end{array}\right\}$ at the zoo? Yes,
I saw a whole herd of $\left\{\begin{array}{l}\text{elephants}\\ \text{(? *the) elephant}\end{array}\right\}$.

Earlier discussion has shown how linguistic conventions providing either absolute or context-dependent restrictions on the non-quantitative and quantitative use of particular words are important as well in the choice of noun forms.

This paper has so far outlined a general distinction between quantitative and non-quantitative interpretations of nouns and indicated that the non-quantitative reference is the basic one. The first part of the paper has shown that linguistic context and conventions restrict the interpretation and use of singular noun forms. Most important to a contrastive analysis of English and Polish with respect to the use of articles in English is the fact that English marks contexts where singular nouns are to be interpreted quantitatively by the presence of the article *a*, while Polish depends on other, broader contextual factors. In the second part of the paper conventional and contextual elements relevant to this description were further defined. While the non-quantitative interpretation of nouns appears to be basic, the semantic context, linguistic and non-linguistic, in which a singular noun is placed determines its interpretation. From the point of view of speech production, a speaker is not only aware that contexts determine interpretation but also that the use of nouns is conditioned by conventions of language and of behavior. Where the grammar of the language allows options in the choice of quantitative and non-quantitative forms of a given noun, the speaker may base the choice on knowledge of preferred associations with the word and its forms and knowledge of strategies persons use in interpreting.

In order to provide a more adequate base for teachers who are teaching English article usage, linguistics should especially direct research to those linguistic conventions which (a) associate some words more closely than others with quantitative references and which (b) establish a hierarchy of contexts according to their ability to imply contrastive reference. Both types of conventional restriction come together in a function which allows an increasing number of words at the quantitative end of the spectrum to be used non-quantitatively in proportion to the degree of contrast apparent in a given context.

A couple of brief remarks are needed to relate the above discussion of singular nouns to the general use of plural noun forms and to the use of the article *the*.

Once the above mentioned determinants give preference to the use of quantitatively interpreted noun in a given situation, the choice of whether a singular or plural noun form will be used is largely dependent on whether one or many objects are being referred to — except where the so-called generic use of these noun forms is involved (cf. (52 and 52)). Choice between these forms seems to be stylistic: that is, based on a particular semantic and syntactic context. Some of the factors involved in stylistic determination have been mentioned in the preceeding discussion.

52) $\left\{\begin{array}{l}\text{Kot je}\\ \text{Koty jedzą}\end{array}\right\}$ myszy.

$\left\{\begin{array}{l}\text{cat eats}\\ \text{cats eat}\end{array}\right\}$ mice

53) $\left\{\begin{array}{l}\text{A cat eats}\\ \text{Cats eat}\end{array}\right\}$ mice.

In general the article *a* functions as a determinant of a noun whose referent object is treated as a single subset, not attributively different from other members of the set, and with which object the hearer is presumed to be unfamiliar. Where the object of reference is considered to be either a subset or a set unto itself capable or reflecting attributive differences in contrast with other (sub) sets of objects, the speaker uses the article *the*. Knowledge of the existence of the set on the part of the hearer may or may not be associated with the possibility that the speaker can refer to the object as an exclusive set. (54), for instance, could not be uttered if the hearer did not already know that crime exists in Detroit. On the other hand, a speaker may simply assert that a given object of reference constitutes an attributively

54) The crime is what bothers me about Detroit.

unique set, as in (55 and 56), or physical properties (57) or convention (58) may define a given object as an exclusive set or subset with qualitative characterisctics distinguishing it in relation to another object of reference.

55 *The crime* is that this information was purposely delayed so that we could not act.
56 Variety is *the spice* of life
57 X and Y together function as *the nucleus* of a group.
58 We are on $\left\{\begin{matrix}\text{the}\\ \text{*a}\end{matrix}\right\}$ wrong track.

The notion of a subset being attributively different from other members of a larger set is required to cover instances like (57), a nucleus being a natural subset of a group, and noun phrases such as *the Rocky Mountains*, which assumes a general class "mountains" —or, rather, assumes that mountain ranges belong to a unique set — in which the single subset exclusively defined by the predicate "Rocky" is included.

There are some characteristics which Polish *ten, ta, to* share in common with English *the*, but these require a separate paper.[4]

a) Ta fabryka wiele produkuje.
det. factory much produces
This factory produces a lot.
b) Fabryka ta wiele produkuje.
factory det. much produces
The factory produces a lot.

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[4] Dr. Jerzy Wełna has pointed out to me that the postnominal use of this determiner in Polish should in particular be examined: cf. (a and b).

ENGLISH VERSUS ROMANIAN COLLECTIVES

Oana Chelaru—Ioniță and Andrei Bantaș

University of Bucharest

0.1. The present paper develops and applies the main points regarding collective nouns seen in semantic-grammatical terms in the sub-classification of English nouns detailed by A. Bantaș in 1978. That sub-classification was in its turn a development and amplification in functional as well as contrastive terms of the classification of English nouns advanced by Prof. Leon Levitchi of Bucharest University in 1970 and then in a revised concentrated version in 1971.

0.2. The major practical gain obtained by the above-mentioned sub-classification was the possibility to offer a more specific description of the grammatical regimen of each class, sub-class or sub-sub-class of nouns, that is to illustrate their behaviour in different contexts in point of pluralization, singularization, use of genitives, agreement, determiners, modifiers, subtitutes, etc.[1] The sub-classification established more groups of identical, unitary or similar behaviour (in a word homogeneous) while substantially reducing the cases labelled "exceptions". Moreover, by rendering more precise the relations between *types of nouns and types of determiners accepted or required by the former,* it pointed out concrete means of eliminating mistakes made in English by speakers of languages in which *nouns are indifferent to the types of determiners accompanying them.*

0.3. As regards collective nouns, their better description was aimed at, providing a more thorough-going motivation of their plural concord and substitutes.

0.4. From the theoretical point of view, the subclassification offers a new foundation for analysing various aspects of English nouns. It is currently used for the Monograph of English Nouns which are we preparing.

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[1] See Bantaș (1971, 1976, 1978a).

1.0. Pattern VI in the above-mentioned sub-classification of English nouns corresponds to L. Levitchi's sixth class — COLLECTIVE NOUNS PROPER. It summarizes the grammatical behaviour of only one meaning of these nouns: *the collective* sense proper, i.e. singular form and (preferably) plural concord. As it is our contention that the other two or three meanings of collective nouns fall into other classes (in conformity with the principle dwelt upon in other papers[2] and detailed as regards collective nouns in this very study under 2.4) the other meanings should be looked up in other patterns, according to their grammatical behaviour: for the sense of *building*, it is but natural to refer to concrete individual nouns (sub-pattern I—3 in our sub-classification); for the *definition* of the abstract notions we certainly have to consider *sub-pattern* I—5; for the *description* of the concrete notions (with nominal predicates mostly) it is but normal to consider concrete individual nouns (sub-pattern I—1); as regards *semantically collective nouns*, those of the type *leafage, plumage* are included in the same sub-pattern I—1 for concrete individual nouns, *the abstract ones,* in the nature of *communications,* like *advice, information, news* have been included in variant C of sub-pattern V—1, while the alleged "collective" nature of such nouns as *forest*, etc. has been ignored — in our opinion fitting sub-pattern I—3 for objects.

1.0.1. Therefore, taking collective nouns proper — or rather the *properly collective sense* of nouns usually termed collective — we find that their principal characteristics are first of all the defining ones — singular form but plural meaning and agreement especially with plural verb in contemporary British English (though less frequently in American journalese and colloquial speech.) They are the elements which set the specific mark on this class, while also giving rise to difficulties, particularly for people who are not accustomed to thinking in terms of *agreement in accordance with meaning* ("acordul după înţeles" in Romanian).[3] Other characteristics are shared in common with individual nouns proper — countability and normal numericalization, the utilization of the definite and indefinite articles, the use of all types of genitive (with marked preference for the synthetic one) — justified by the feature [+human]. As regards gender, in that majority of cases when people employ collective nouns as plurals, they also conceive the latter as standing for the common gender (since both men and women are viewed as part of this conception), the substitutes being *they, theirs, who, whose, to whom, whom* (as well as *that*); with people who conceive them as singulars — therefore within the limits of individual nouns proper, the gender ascribed to them is neuter (with *it*, etc. as substitutes).

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[2] See Bantaş (1978b).

[3] See Bantaş (1977).

1.0.2. In our classification, sub-pattern VI-1 includes only humans while sub-pattern VI-2 includes groups of both human and non-human animates. The growing category of collectives is more or less half-way between individual nouns and nouns of multitude. All the other points in our description are subordinated to the basic nature of a plurality of beings taken as a whole, therefore forming a unit which can be multiplied, counted, etc.

1.0.3. Ambivalent collective nouns, that is groups of either animals or humans (e.g. *crowd, flock, herd,* etc.) have been placed by us in sub-pattern VI-2 which differs from the main sub-pattern only through these semantic features and their grammatical consequences. In this particular case, certainly, the utilization of the neuter gender reflected in substitutes is more frequent than with sub-pattern VI-1.

Taken all in all, pattern VI offers similarities with pattern VII of nouns of multitude as regards the presence of the singular form with plural meaning, of the concrete, human nature, of the common gender and substitutes as well as of the use of genitives. On the other hand, there are partial differences as regards the fluctuations of agreement in the pattern of collective nouns and the use of determiners; the most substantial differences from class VII lie in the uncountability of the latter, which require special means or forms for their numericalization.

1.0.4. As collective nouns have undergone an obvious evolution which continues under our very eyes, (as regards quantity, spreading and even in point of logical motivation), we believe they involve a very ample analysis with a multitude of aspects. Most probably they also shed light on some contemporary tendencies in English.

1.1. EVOLUTION

From the historical point of view, as against the two *collective nouns* proper (*parliament* and *government* — therefore in the legal or political vocabulary) found by us with a plural predicate, in 18th century texts, in 19th century texts their number increased to several dozens: *family, crew, team, nation,* etc.

In texts written in our century — irrespective of the register, i.e., in scientific and official texts as well as in literature and newspapers recording colloquial English — we notice that this category of nouns has been assuming an increasing scope, through both the growth in the number of nouns included in this category and the permanent extension of the cases when they are used with plural verbs and substitutes.

1.1.1. Therefore, on the one hand there is a substantial and, in our opinion, ***incessant increase in the number of singular nouns which can be used with a singular or plural verb*** according to whether the individual concept, or on the

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contrary, the group concept is prevalent. Examples have increased and spread so much that nowadays we are hardly aware of the situation except when they provide really surprising or striking novelties.

Such is now the position that it is possible to say, at least theoretically or hypothetically, that *any noun referring to a group of people* (*orchestra, school*, etc.) can be used with a plural verb, without anybody being surprised — provided the predominance of the group concept is made clear enough.

We are basing this assertion on the observation that such instances of usage which seem to us striking because they were rare decades ago, have now come to be used thus as a matter of course and we foreigners have to learn to take them in our stride, as English speaking people seem to do. About a decade ago, when we found a headline reading *Australia have won their first cricket match against Great Britain* we somehow felt that — however surprising the example might have been for us — there were two elements to be taken into consideration: (a) *It was not a mistake* or at least it was probably not perceived as a mistake by English speaking people, since it appeared in a newspaper; and (b) *It was no accident* either because it was a part of *a developing pattern*. It was just an *illustration of a trend*, which had all the chances of gaining ground because on the one hand it had proved its vigour for a long time already and on the other hand it fitted a more or less general way of thinking or grammatical logic of English speech.

Recent publications seem to confirm this approach with a vengeance: the sports columns now refer to many national teams by the name of the country alone, *while using agreement and substitutes in the plural.*

1.1.1.1. Of course, there are a few facts hardly to be overlooked:

(A) — First of all, examples are still contradictory, there is much fluctuation from one author to another, from one publication to another, (especially American vs. British), and sometimes we have found inconsistencies of usage within the same (British) text — a short article perhaps.

(B) — The conclusions we can infer from this are: a) that we merely have to do with a trend which is not yet firmly established or perfectly rounded off theoretically — or practically either, for that matter; b) that the inconsistencies can perhaps be explained by several more or less subconscious factors connected with the prevalence of the group concept (or respectively the individual concept) upon the speaker's or writer's mind and with the other elements of motivation discussed above; c) that insofar as we have become convinced of the presence and direction of this trend we ought to promote it in our own usage and teaching too, in order to keep pace with this development in the English language.

(C) — We cannot refrain from admitting that in many cases it is easy to perceive the logical process underlying these instances of plural concord and substitutes — namely the omission or clipping of such a word as *team* (in *France have scored heavily against Wales*) or *crew* (in *The Victory have unloaded new goods in our harbour*).

(D) — Even these inconsistencies may be illustrative of certain points — which are in fact aspects of the trend we are discussing. For instance, in our opinion, a close analysis of contradictory examples reveals — besides the component of the group concept — another component of the trend, namely the propensity towards using the *singular for description* or related situations and *the plural when some kind of action* — psychical, intellectual or perhaps emotional — is *involved.* Such is the only explanation that we could provide for instance for the presence of the following two divergent examples within a few lines of each other in one and the same newspaper article: *The union leadership have decided to call a strike* but *The working class has to have its representatives in Parliament.* In principle, if it is logical to use the plural for a small group of people such as union's leaders it is even more logical to use it for a larger group such as the working-class. Probably, however — and this is our assumption — in the first case the writer sub-consciously thought of the union leadership assembling, discussing and finally adopting a decision — all these being *actions.* In the second case it was a theoretical point connected with the description or definition of a feature asserted as inherent in the working class — or anyhow there was no action involved because the verb '*to have*' did not imply any action, being just a modal.

(E) — There are also inconsistencies more difficult to explain: the use of a plural verb, yet of a singular substitute for the same noun, or vice-versa. A further analysis of this problem will probably reveal many other points which may prove valuable theoretically and especially in the pedagogical practice, etc. Explanations will provide a better basis for teaching and translations.

1.1.2. The second aspect of the tendency exhibited by collective nouns from the historical point of view is a fairly rapid *increase in the number of cases when collective nouns* (or perhaps, conceivably collective nouns) *are actually used with a plural verb.* The effervescence — or probably even explosion — of this peculiarity in English speech and writing of our times seems to indicate that the tendency is now at its height, that it may be coming to a head, that it therefore stands a fair chance of becoming fully established within the foreseeable future. That is why, *it is likely to become normative* and so we ought to comply with it in usage and teaching.

So, in spite of misleading fluctuations — as we have seen, sometimes justifiable and more rarely unaccountable — the tendency seems to be both obvious and motivated, being reflected on a diachronical as well as on a synchronical plane.

2.0. GENERAL AND TAXONOMIC ASPECTS

As a matter of fact, in the light of the above evidence and considerations, *the very notion of collective nouns* requires some discussion for various reasons:

2.1. First of all there are many grammars in which the nouns which we call collective do not appear as such, but under various other headings. The most usual confusion is that with nouns of multitude, especially with and because of the noun *people*. While we retain the distinction between collective nouns proper and nouns of multitude as made by Professor Leviţchi, we cannot refrain from pointing out that such a confusion originates also (or perhaps especially) in the twofold or multifold nature of the noun *people*. In fact, perhaps it is wrong to speak of its non-unitary nature, but rather of the lack of unity or similitude between the patterns of grammatical behaviour of the various meanings of such a polysemous noun.[4] It is one of the factors which have led us to the conclusion that we need a smaller lexical grammatical unit, also to be used as a dictionary entry: *the sem-grammeme*.[5]

Besides, there are more or less clearly stated opinions contesting the very existence of the category of collective nouns — to say nothing of so many books which implicitly ignore them. As a matter of fact, the position is that, taken all in all, we have the whole range of possible attitudes towards collective nouns — from complete ignorance of them, confusion with other categories, a clear definition of the category, going up to a rather comprehensive approach like that of Zandvoort (1965), who includes even such words as *foliage*, *leafage*, *forest* and *oak* among collective nouns.

2.2. The positive points as well as some aspects of neglect in the bibliography, have led us to the following observations:

Zandvoort subdivides collective nouns into several categories, and his demonstration and exemplification of the matter (1965 : §§259—264) are not only convincing, but also seminal enough. The only objection would be that he brings *inanimate* nouns into this category which is normally regarded as referring *to beings and particularly to human beings*. Such is the traditional — *stricto sensu* — conception of it, but of course Zandvoort's infringement of the limits of this conception can easily be redressed by adopting a broader conception — *lato sensu* — by extending the notion so as to include *a collectivity of beings, both human and otherwise.* Moreover the introduction of inanimate elements within the same category is no offence because there is a great merit in his calling attention to the collective or multitudinal meaning of such words as *foliage* which from this standpoint (of the assumption of numbers within a whole) can logically be compared to nouns like *army, group, poultry, heap, flock,* etc.

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[4] Bantaş (1974).

[5] Bantaş (1975).

It seems to us logical to accept the idea that these may be called collective nouns, but on the other hand we have to underline that the matter has no grammatical implications (like those of *nation, government, crew,* etc.) and that is therefore a *semantic* problem rather than a *grammatical* one.

In fact, this semantic aspect of collectiveness or multitude may be just a point of speculation which, if pushed too far, may lead to unnecessary remarks, because there are numberless nouns which include a plurality of elements, and yet we would think it is absurd to consider the word *book* collective because it includes many pages, or the word *page* collective because it includes words, or *novel* because it includes chapters, episodes, etc.

2.3.0. PROPOSED SUBDIVISION

Proceeding from Zandvoort's valuable suggestions — or at least references to certain special categories and subcategories in the Leviţchi classification of nouns, we can reach the following new sub-classification, which also synthetizes the behaviour of the various sub-classes of nouns with a collective meaning:

2.3.1. (A) *Nouns of multitude* (in their turn apt to be subdivided into human — e.g. *police* — and animal — e.g. *poultry*). They share the following characteristics: they have a singular form but agreement in the plural, they can only be individualized through the use of other nouns in phrases (*a member of*, etc.) or by special means. Some of them are preceded by the definite article as an indispensable determinative. Yet there are differences among them, especially as concerns countability and numericalization.

2.3.2. (B) *Collective nouns proper* (e.g. *crew*) under which heading we consider only groups of human beings. The nouns have a singular form with agreement either in the singular or the plural according to the rules generally known for collective nouns and accepted by us in the form in which they are more frequently applied nowadays, they are countable and pluralizable in the normal way. The main difficulties connected with them are those of gender and number entailing the problem of substitutes (all of which — as shown below — can only be solved through the dissection of meanings which, incidentally, provides the smallest analysable unit — cf. section 1). Probably the most reasonable approach to such difficulties would be to distinguish three basic meanings for most collective nouns: abstract, concrete as a unit, concrete as a group.

2.3.3. (C) *Ambivalent collective nouns* — including the human and the animal kingdoms — that is nouns like *host* or *group* which can be used for both people and animals, with the addition of the words *herd, flock, bevy* which, though originally referring to the animal kingdom, can be applied to human beings especially in a figurative sense.

These nouns share the characteristics of collective nouns proper but usually reflect only the characteristics of subdivisions/meanings (b) and (c) — cf. 2.4.2 and 2.4.3. Of course, the category is much more limited in importance than subcategories (A) and (B) and less numerous than some of the subcategories following below.

2.3.4. (D) *Individual nouns of multitude* normally include epicene representatives of the animal kindgom whose name can stand for both singular and plural — the latter being used without the proper mark of the plural by everybody for a certain number of them and by some people professionally connected with them for the rest, e.g. *deer, sheep, fish, trout, grouse*, etc. (cf. Zandvoort (1965) for *giraffe*, etc.) On the other hand, the phonetic peculiarities of some names of peoples ending in a sybilant (*English, Swiss, French*) cause them to fall rather inadvertently under the same heading, they sharing some characteristics of this group but differing through the feature [+human] and the means of numericalization which are not homogeneous. Obviously they also differ through the means of specifying their sex, for such nouns as *the English, the French*, etc. Therefore we should suggest a subdivision into D (a) and D (b).

2.3.5. (E) *Nouns denoting a quantity or multitude* of *things* or *objects* with a possible *-s* plural — e.g. *fruit*(s), *hair*(s), *coal*(s), *coin*(s). If we consider them attentively — and possibly if we add the nouns *craft* and *aircraft* — we realize that some differences are perceptible even inside this small group: the *-s* plural would mark different species in the case of *fruit* (very much as in the case of *fishes*) while it would specify just several elements in the case of *hairs* or *coals*. Nevertheless these nouns share most of the other grammatical characteristics, including the neuter gender.

2.3.6. (F) *Semantically collective notions* (with no grammatical implications in most cases) such as *heap, lot, leafage, foliage, money, stock, advice, furniture*. This category is not perfectly unitary either, and such previously mentioned nouns as *craft* and *aircraft* as well as the delusive noun *news* may claim a place within in the same category, increasing the diversity of its grammatical regimens (behaviours). Nevertheless, they do share many characteristics, with the exception of the not very important concrete-abstract distinction and of the different means applied for numericalization when the latter is possible. A special note is required for the aspect of equivalence in other languages, for instance Romanian, where on the one hand such words as *leafage* are rendered by similar semantically collective notions like *frunziş* which do not seem to arouse the attention of grammarians as they pose no grammatical problems, while on the other hand the collective meaning of some of these nouns — *money*, etc. — is rendered by a normal plural. They reject the feature [+animate] — and with a vengeance [+human] — being neuter and singular. The fact that in discussing such nouns one Romanian grammarian[6] mentions also the noun *studenţime* ("students") looks like a mere inadvertence.

2.3.7. (C) *Generic notions* — for species of plants, trees, etc. which could be taken as instances of metonymy but for the fact that the examples quoted by Zandvoort (1965: §263) — *cactus, oak, marigold*, etc. — do not point to a literary or poetic context (perhaps rather to a scientific one).

2.4.0. SEMANTIC-GRAMMATICAL CONSIDERATIONS

As we see it, the semantic anatomy of a typical collective noun reveals meanings of the following basic kinds:

2.4.1. (a) *abstract* meaning taken in a general sense (as a unit) used more specifically in descriptions or definitions, in the singular alone, particularly with linking verbs of being, as part of nominal predicates. Typical examples would be *The family is the basis of society* therefore generalized, like a definition, or as an historical notion, e.g. *The English Parliament was founded in 1217*. In this case these nouns are neuter and singular, therefore naturally replaced by *it*;

2.4.2. (b) *concrete* meaning (or abstract — the distinction is difficult but not very relevant) taken as a unit, used especially in a description of the notion, the members of the group being perceived as a unit, not differentiated, not important as individuals but serving rather as a sort of background for the notion; (they are linked together by blood, juridical or social relations — joint occupation, location, appurtenance or some other form of common involvement). The group concept does not take precedence over the unit-concept. In this case, particularly in descriptions of such nouns — e.g. *My family is of*

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[6] See Constantinescu Dobridor (1974).

old Transylvanian descent or *The crew is made up of seventeen people* — these nouns are still taken to be neuter singular, the pronoun *it* being their natural substitute. Again the singular is used, of verbs denoting state or appearance or location — therefore as part of both nominal and verbal predicates. The verb *to have* can also appear in many cases, with its (static) meaning of possession;

2.4.3. (c) the *truly collective* meaning, (concrete, as a group) denoting the plurality of beings viewed at the same time as a multitude (as numbers) and as members of the same body. Although such a classical example as *My family are at the sea-side* is often proposed, it seems to us unconclusive, or even misleading (as proved by our teaching practice) because it turns the learner's attention from the real issue; moreover the bulk of the examples indicate that predominant are verbs of *action* (physical intellectual and perhaps emotional), verbs denoting *location* (usually accompanied by adverbial elements) and verbs of *movement*. On the whole we could say that these plural predicates are used in order to indicate the *activity* of the subject rather than the *state*, *appearance*, or *description* of the subject. The situation therefore occurs mainly when we refer to the position in space and time *of the members of the collectivity, when the awareness of their severalty is fairly prominent in our mind.*

2.4.4. (d) To these meanings may be added the irrelevant concrete sense: the building of the *Parliament, Congress, school, University, Department, Council,* etc. It is an additional meaning with many collective nouns, but it does not properly fall under the incidence of our discussion. (We believe this matter was already elucidated when we showed how different meanings entailed different behaviours — in this case the sense of "building" therefore irrelevant because it is just an ordinary individual noun). *In terms of both evolution and current situation* we are particularly interested in type (c) meanings and that is why we are devoting an extensive discussion to them.

2.5.0. POLYSEMY

In fact we should like to take advantage of the amplitude and diversity of problems raised by collective nouns in order to point out further aspects of the interdependence between the various chapters of linguistics: for instance collective nouns very well demonstrate the relations between semantics and grammar because most of the difficulties involved by them proceed from *polysemy*.

We daresay it is rather difficult to keep grammatical criteria free from semantic ones — and vice versa. If we accepted the idea that dissimilarities in the grammatical behaviour of different meanings are essential enough to warrant a diversified treatment in didactic works and dictionaries — both guiding learning — we could eliminate some of the difficulties which in our opinion are artificial, being generated merely by the indiscriminacy or oversimplifications of wholesale treatment.

2.5.1. A graphic example pointing out the multiplicity of aspects involved by collective nouns is provided by *royalty*.

In a sentence like: *royalty are above suspicion* we are inclined to take it for a collective noun, employed with a plural verb. Yet, by comparing it with other sentences such as *royalty is similar to monarchy* and *royalty and monarchy are similar notions, the abolition of royalty was a first objective, his royalties are due next month, reproduction is subject to royalty, royalties are/royalty is to be paid in advance, he is royalty*, we obtain a rather heterogeneous if not puzzling image of this word.

That is precisely why we suggest the separate treatment of each meaning of such nouns as *independent semantic-grammatical units*.

royalty 1 — figurative, uncountable=monarchy.
royalty 2 — noun of multitude, uncountable, non pluralizable=royal family, monarchs, people of royal blood
royalty 3 — (especially pl. royalties) an entirely different meaning apparently uncountable, yet apt to be used either in the plural or singular= fees due for authorship, etc.

3.1.0. GENDER

The notion of collective in its usual sense has implications mainly in the field of agreement. Yet, when we consider it in the broader perspective of the multitude or multiplicity of component elements (animate or inanimate) we easily realize that it has implications in other respects too — particularly gender and substitutes.

3.1.1. There is a sort of consensus among those grammarians who do discuss collective nouns and nouns of multitude (perhaps under different labels) that they belong to the common gender. This assertion (implicit or explicit) is safe enough as a rule. Unfortunately, however, we have to split hairs in this matter as well, because through the nature of the elements which they summate, certain nouns in these categories are destined to represent (permanently or at least temporarily) one of the two sexes: *the clergy, the foot, the horse, infantry, cavalry, the military, the constabulary, the gendarmerie*, would naturally be masculine, *womanhood* and *womankind* are naturally feminine (while for instance, *yeomanry* would be doubtful, though probably if English people gave it a thought, the masculine would take precedence of the feminine).

This would apply also to other nouns which, at least in the past, represented exclusively a group of males, though in our century, and particularly in the last decades, have ceased to do so (we are thinking of *the police, the army, the crew* — the last still holding good for *the navy*, in its turn normally construed as masculine).

In fact, this discussion must aim at a solution similar to that for individual nouns representing professions. Normally they are of the common gender, with some exclusive forms for the two sexes but sometimes denoting preeminently the masculine or, on the contrary, the feminine (e.g. *cook, nurse*, etc.).

3.2.0. SUBSTITUTES

Having noticed that the tendency goes towards the utilization of collective nouns in three different ways according to the meanings which we ascribe to them, we have to establish also what pronouns are used to substitute for collective nouns. It is easy to see that the pronoun *it* is typically indicated for meanings one and two, while the pronoun *they* is logically required by the third meaning.

3.2.1. Though we notice inconsistencies in this respect even among English speaking people, we probably have to adopt a unitary approach in this respect too, following the same line of thought as for the predicate. Yet, when it comes to discussing substitutes and prescribing norms for their usage, we cannot overlook inconsistencies among English speaking people as well as foreigners regarding the use or the choice of the relative pronoun, *which* or *who*. Examples point to the fact that sometimes the pronoun *which* is used with collective nouns even when they are conceived as groups (with a plural verb). Yet we believe that there is no reason to do so and it seems to be absolutely logical to adopt Zandvoort's prescription that collective nouns should be replaced by the relative pronoun *which* when they are followed by a singular verb because the group as such (as a unit) is meant, and by the relative pronoun *who* when they are used by a plural verb because the individuals forming the group are thought of (Zandvoort (1965:§461)).

Besides the psychological motivation for using a plural verb and plural substitutes with collective nouns (provided the previously mentioned circumstances, qualifications and conditions are present) we can also find a logical motivation for it. One of the aspects is that from the point of view of gender this offers the advantage of no longer having to choose out of neuter, masculine or feminine and using the pronoun *they* — common gender — as a substitute, therefore giving rise to fewer problems.

3.2.2. This peculiarity is noticeable also in connection with indefinite pronouns having a collective meaning — *everybody* and occasionally *anybody* for which in many embarrassing stiuations English people have been using the substitutes *they, their, theirs* — which have now become generalized in this situation, formerly subject to certain fluctuations. Of course, this does involve a certain amount of surprising inconsistency since the indefinite pronouns normally agree with a singular predicate, ans so a sentence like *Everybody is to take their seats in the coach at seven o'clock* appears rather incongruous (which in fact also happens in Romanian with the equivalent *toată lumea* though perhaps not in other languages).

4.0. ROMANIAN

Collective nouns remain a rather marginal problem in Romanian grammar, often being discussed but indirectly, as part of broader grammatical categories, such as gender or number.[7] Of course, the reason must be sought in the absence of any grammatical implications in the behaviour of collective nouns in Romanian. Therefore, they can only form a lexical-semantic category, (characterized by the features [+collective] [+animate] [+animal] [+human]).

The competition between the "semantic" plural and the "morphological" singular is not manifest in the case of the Romanian collectives, agreement/concord with the verb perfectly harmonizing the formal indication of the number of the noun, with the number and person of the verb.

4.1. EVOLUTION

The process of development of collectives in Romanian need not be ascribed to any non-Romance influence — as Maria Manoliu-Manea (1970) convincingly demonstrates. Latin included the category of collectives — fairly well represented — particularly that of collective "vegetal" nouns (neuter and feminine). In our opinion, the fact that collective nouns are still numerous in Romanian with reference to the vegetal kingdom, confirms a specific Romance tendency, which attracts also non-Romance elements — for instance the highly productive Slavonic sufix *-iş*. While collective neuters are often to be identified as etyma in the source language — Latin — collective feminines are for the most part of Slavonic origin: e.g. *cireadă* (herd), *grămadă* (heap), also such Latin words *multitudo, turma, copiae* are not to be overlooked.

Anyhow, Maria Manoliu-Manea concludes, the distribution of Romanian collectives among neuters and feminines, justified by the history of our language, are a specific, innovating feature of Oriental Romance languages.

In order to complete the diachronical picture of our discussion one should also add that out of the 25 suffixes registered by Florenţa Sădeanu (1962) as discharching a collective function, only 4 are of exclusive Slavonic origin.

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[7] See Manoliu-Manea (1968, 1970).

Collective nouns of a plural form (the so-called varied plural of nouns of material and abstract nouns) originally appeared — to quote Paula Diaconescu (1970:115) — in the 16th century, when abstract nouns or nouns of material acquired a plural differentiated from the semantic point of view, — e.g. *hrane* (victuals), *cărni* (literally: fleshes, as in the idom *curg cărnile de pe el* =*his fleshes hang loose on him), *trebi* (businesses, affairs).

The varied plural in *-uri* also appeared with feminines in the 17th century, after the model of plural neuters of the type *fînuri* (hays), designating various species or varieties as part of the collectivity: e.g. *cărnuri* (kinds of meat), *arămuri* (varieties of copper), *frumuseţuri* (beauties).

The varied plural sees extensive spreading in contemporary Romanian, reaching semantic differentiation =e.g. *fantezie* (imagination) *fanteziuri* (silk, materials with a fancy pattern) — or even morphological distinctions from the singular form — e.g. *brînză/brîzeturi* (cheese/varieties of cheese). Not a few linguists suggest the consideration of the two flexional forms as belonging to two different nouns.

In colloquial Romanian one meets collective nouns with the singular form agreeing with a plural verb (this kind of concord being repudiated by the Academy Grammar[8] as incorrect):

e.g. "Il jeliră ai săi, îl jeliră boierii, îl *jeliră* şi *poporul*" (Petre Ispirescu).

The case is interesting for the way in which the speaker made a semantic "analysis" of the noun harmonizing it with the plural of the verb, probably also under the morphological pressure of the cases of agreement already enounced, (his folk, the boyars).

The Romanian Academy Grammar also considers as deviating such an example as: "Două sute de lei *este* o *sumă*" (=two hundred lei is a sum) instead of „Două *sute* de lei *sînt* o sumă" (=are).

In our opinion the deviation in the first case should be explained not so much through "wrong" concord with the predicative but rather through the semic "analysis" made by the speaker who takes the object to be a unit (while in the second case the object is seen as a multiplicity/multitude of elements).

A kind of deviating/anomalous semantic agreement is also registered with a number of indefinite pronouns which take over the group value (unlike the situation in English):

e.g. "Au sărutat fiecare mîna taichii" (Each of them kissed their father's hand... — I. L. Caragiale).

"Nici unul nu dormeau", (=neither of them *were* asleep — Zaharia Stancu).

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[8] See *Gramatica limbii romane*, Vol. II, chapter "Excepţii şi abateri de la regulile acordului". 110-114

Constructions like "Ce-s cu astea aici?" (=What *are* the matter with *these*? instead of "Ce-i cu astea aici?" =What's the matter with these?) which have acquired a certain amount of currency in contemporary Romanian point to some tendencies which have become increasingly obvious.

4.2. GENERAL ASPECTS

Almost all Romanian grammars define collective nouns as denoting in the singular a multitude of identical objects, seen in their totality, without specifying any interdiction of a semantic nature, of the type [—animate]:[9] *aluniş* (hazel-tree grove), *făget* (beech-tree forest), *studenţime* (all students, the student world).

The book *The morphological structure of contemporary Romanian*[10] offers a supplementary specification, apt to clarify the way in which speakers of Romanian conceive their "collective nature": "Common collective nouns describe/define a determined multitude of identical objects, considered in its totality, *irrespective of the individuals that make it up* (Iordan et al. (1967: 72)).

Therefore, Romanian "collectives" form a lexical category in accordance with exclusively semantic criteria. The perception of the feature [unity in multiplicity] as predominant — and not of the feature [multiplicity in unity] — largely determines the grammatical behaviour of collective nouns in Romanian, their agreement with a singular verb.

On the whole, collective nouns do not betray their morphological singular, except when the speaker intends to evidence the *plurarity of elements* within the unit by some supplementary means, thus setting the formal singular with the semantic plural (Cîmpeanu (1975:181)).

The specific tendency of Romanian to resort to analytic means of expression holds good in this case too. A number of nouns denoting "number, multitude, quantity", together with their concrete plural determinations can realize agreement in either the singular or the plural, according to the speaker's intention of emphasizing either the totality or its component elements: *o grămadă de* (heaps of), *o mulţime de* (a lot of), *o seamă de* (a number of), *o sumedenie de* (a multitude of) etc.

e.g. "Si unde nu s-au adunat o mulţime de fete şi băieţi la şcoală" (And a multitude of girls and boys *were* gathered in the schoolyard — Ion Creangă; after *Grammatica limbii romane*).

It is interesting to point out that the "rule of semantic/non-grammaticized agreement" operates also when the determinations of those nouns are nerely inferred:

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[9] Constantinescu Dobridor (1974:34).

[10] See Iordan et al. (1967:72).

e.g. "o seamă se căţăraseră şi pe zidul,.." (a number *were* perched also on the wall — Mihail Sadoveanu; after *Gramatica Limbii romane*).

Agreement in the plural can therefore be applied only to a limited number of nouns which do not indicate the group-meaning by their theme and which have to resort to supplementary concrete determinations. But, very much as in English the multiplicity of elements is more clearly evidenced when the subject is associated with verbs of movement, of action, which enable one to notice the dissociation, the discontinuity of the group:

e.g. "Din spre Copou se văd venind o grămadă de oameni..." (From the park *are* seen coming a crowd of people,... — I. L. Caragiale; after *Gramatica limbii române*).

4.3.0. CLASSIFICATION

4.3.1. According to Finuţa Asan (1958), a first criterion for classifying collective nouns can be the morphological index of collectiveness. Consequently, there are two types of collectives:

(A) *Morphologically marked collective nouns*, formed by derivation with suffixes pointing to the whole, seem to evoke the part:

e.g. *brădet* (fir-tree forest) from *brad* (fir-tree); *cărpiniş* (hornbeam forest) from *carpen* (hornbeam).

The inventory of these suffixes indicating the collective (25 in all) was drawn up by Florenţa Sădeanu, in the above-mentioned study. Nevertheless, we take the liberty of adding to her list the suffix *-lîc* (of Turkish origin) whose meaning is (not exclusively) collective, attached both to nouns designating groups of humans and to groups of inanimate elements:

e.g. *musafirlîc* (a crowd of different guests); *calabalîc* (goods and chattels).

The fact that *-lîc* functions as an independent suffix is verified in the case of nouns not borrowed from Turkish, such as *murdalîc* (offals). Of course, we have to do with a suffix which is not very productive nowadays, but is still employed because of its expressive (derogatory) value.[11]

In the first table accompanying this paper, we indicate separately the morphologically marked collectives, associating the semantic features [+human]; [+animal]; [—animal]; [—animate]. Their agreement is exclusively in the singular, with the exception of the nouns *o mulţime de* (a lot of), *sumedenie de* (a multitude of), *spuzenie de* (a host of), *puzderie de* (a crowd of) — cf. also the obsolete *întunecime de* (a cloud of) — all of them apt to receive a plural determination and apt to agree with a singular or a plural verb, in accordance with their meaning.

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[11] Pascu (1916:409); *musafirlîc* and *calabalîc* are also attested by *Dictionarul explicativ al limbii române.*

(B) *Lexically collective nouns*, denoting a plurality of objects, considered as a whole, without indicating elements that make up the respective collectivity:

e.g. *ceată* (band, gang), *grup* (group), *pădure* (forest), *popor* (people, nation), *detaşament* (detachement), *comitet* (committee), *federaţie* (federation), *buchet* (bouquet; *fig.* bevy) *maldăr* (heap).

The criterion for delimiting this type of nouns remains strictly semantic, which may be aleatory in the absence of formal marks. When rendered absolute, this criterion may lead to the mistake of including within the sphere of collectives, such nouns as *nisip* (sand), *grîu* (wheat), *ciorchine* (cluster), *barbă* (beard), *mătreaţă* (dandruff).[12]

In our tables we separate lexical collectives not only according to the way they associate the semantic features [+human] [+animal]; [—animal]; [—animate], but also according to the way agreement is realized in the singular alone — *partid* (party), *popor* (people, nation), *pădure* (forest) — or in variation singular/plural with nouns which acquire plural determinations: *stol de* (flock/bevy of), *liotă de* (litter of), *maldăr de* (heap of).

It must be noted that morphologically marked collectives (numerically) designate groups of things and plants (387 and, 271 derivatives, respectively)[13] for which Romanian does not generally have lexical collectives. The smaller number of derivatives designating groups of persons (210) or animals (90) is explained by the numerical substitution of lexical collectives which are extremely abundant: *bandă* (gang, band), *gaşcă* (gang), *trupă* (troop, troupe), *brigadă*, *uniune*, *turmă* (herd), *cireadă* (herd, flock), *herghelie* (stud), *cîrd* (flock; bevy), *roi* (swarm), etc.

4.3.2. We have considered it necessary to distinguish between collectives singular in form (designating a plurality of objects taken as a whole (and collectives with a plural form) (the so-called varied plural) indicating various species, varieties as part of the collectivity.

(A) *Collectives singular in form* account for most collective nouns in Romanian. They agree with singular verbs, with the exception of those which can receive plural determinations and therefore agree with either a singular or a plural verb, according to meaning.

They include human, animal, vegetal or inanimate groups. In the case of collectives which are not morphologically marked, the individualization of the part is achieved in various ways — *un membru al grupului, un element al colectivului, un detaşament de militari, un maldăr de lemne* (a heap of fire wood)

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[12] In her above-quoted article, Finuţa Asan (1958) criticizes the inclusion of such nouns among collectives.

[13] F. Sădeanu (1962).

TABLE 1

Category/ Class	Morphologically marked	Examples	Semantic features	Agreement	Gender	Individualization	Numericalization	Remarks
1 COLLECTIVE NOUNS WITH *SINGULAR FORM*	–	partid, popor, organizație	[+human]	Sg	N/F	Un membru al… Un element al… (a member/element of…)	pl.	
	–	turmă, stol herghelie	[+animal]	Sg/Pl.*	N/F	un stol *de păsări* (a flock/bevy of birds)	pl.	*[+pl. determination]
	–	cîrd, grămadă, liotă, grup, seamă, ceată	[+animate] [+human]	*Sg*/Pl.*	*N/F*	grămadă: de oameni, de lemne, de animale. (a lot of people, firewood, animals)	pl. (some)	*[pl.det.]
	–	pădure	[–animal]	Sg.	F		pl.	
	–	îmbrăcăminte, încălțăminte	[–animate]	Sg	F		–	
	–	maldăr, stog stivă	[–animate]	*Sg*/Pl*	N/F	un maldăr: de cărți, de haine (a heap of books, clothes)	pl.	*[+pl. det.]
	–ET –IME –URĂ –IE –ĂTATE –LÎC	tineret tinerime scursură solie păginătate musafirlîc	[+human]	Sg	N/F	thematic	pl. (some)	
	–INĂ –IE –IME	stupină gîscănie broștime	[+animal]	Sg.	N/F	thematic	generally without a plural	

tab. 1 cntd.

Category/ Class	Morphologically marked	Examples	Semantic features	Agreement	Gender	Individualization	Numericalization	Remarks
	–ARIME	muscărime						
	–IŞTE	roielişte						
	–AR	viespar						
	–IŞ	păienjeniş						
	–IME	mulţime	[+animate] [+human]	Sg/Pl*	F	sumedenie: de oameni, de obiecte (a multitude of people, objects)	pl.	*[+pl. det.]
	–ENIE	spuzenie						
		sumedenie						
	–IE	puzderie						
	–EALA	acreală	[–animal]	Sg.	N/F	thematic	albituri verdeţuri	
	–IŞTINĂ	cinepiştină						
	–TURĂ	albitură						
	–EAŢĂ	verdeaţă						
	–IŞTE	aluniştе						
	–AR	arinar						
	–IŞ	stejăriş						
	–ET	brădet						
	–EALĂ	urzeală	[–animate]	Sg.	N/F	thematic	pl. (some)	
	–ĂRIE	rufărie						
	–ĂRAIE	apăraie						
	–IŞ	mărunţiş						
	–EŢ	bănet						
	–LÎC	calabalic						
2 COLLECTIVE DOUBLETS *SINGULAR/ PLURAL*	–ET	cuconet-cuconeturi	[+human]					
		cirpet-cirpeturi	[–animate]	Sg/Pl	N/F	thematic	pl.	

tab. 1 cntd.

Category/ Class	Morphologically marked	Examples	Semantic features	Agreement	Gender	Individualization	Numericalization	Remarks
	–IE	sticlărie-sticlării						
	–URA	albitură-albituri						
	–EAŢĂ	verdeaţă-verdeţuri						
3 COLLECTIVE NOUNS WITH *PLURAL FORM*	–	cărni	[–animate]	Pl	N/F			
	–	cărnuri	pl = p2 pl ≠ p2 C					
	–	bunătăţi	C					
	–	fiare					Sg. without collective value	
	–	atenţii	actual					
	–	fanteziuri	C					
	–ET	brînzeturi						
		pînzeturi	pl ≠ p2					
		fireturi						

— and by means of the theme in the derived collectives — ***brădet*** (fir-tree forest) from ***brad*** (fir-tree), ***cărpiniş*** (hornbeam forest), from ***carpen*** (hornbeam) ***tinerime*** (youth, young people), from ***tînăr*** (young one).

Collectives singular in form can generally be counted, some of them having a collective doublet in the plural, though with a changed meaning:

e.g. ***albitură*** (vegetables for soup) — ***albituri*** (bed clothes); ***mărunţiş*** (small change) — ***mărunţişuri*** (small objects/small ware trifles, knick-knacks).

The plural of nouns singular in form must be seen as a sign of weakening of the semantic mark of collectiveness (Sădeanu 1962). In a first stage, certain ("collectives" decline in expressiveness and require accentuation by some analytic means:

e.g. ***bănet*** (quantity of money) may receive a quantitative determination: ***mult bănet*** (a large quantity of money); ***vorbărie*** (empty talk)—***multă vorbărie*** (lengthy empty talk).

(B) Similarly, one reaches the strengthening, emphasis of collectiveness through the synonymic utilization of singular and plural doublets of the same collective noun (Sădeanu 1962):

e.g. ***cuconet*** (the fair sex) — ***cuconeturi*** (members of the fair sex); ***cîrpet*** (rags), ***cîrpeturi*** (various rags).

(C) Probably undergoing the intermediate stage of doublets, a number of collective nouns have established their presence in the language in their plural form alone. This type includes nouns of material and abstract nouns. This collective plural — also called varied — indicates different species within the collectivity ($p_1 \neq p_2$ — that is the non-identity of the respective parts, as Maria Manoliu-Manea says).

e.g. ***cărnuri*** (meats), ***brînzeturi*** (sorts of cheese), ***bunătăţi*** (dainties, delikatessen).

Abstract nouns acquire a concrete or "referential" meaning in the plural (Manoliu-Manea 1970).

e.g. ***atenţii*** (presents, gratifications); ***fiare*** (scrap iron).

This category of nouns is defined only through the presence of the feature [+inanimate].

4.3.3. In table 2 we try to offer a contrastive picture of English and Romanian as regards possible equivalences in the sphere of collective nouns.

(A) Nouns of Multitude and Individual Nouns of Multitude have no equivalent in Romanian.

(B) English collectives proper, of the type ***crew, family***, seem to have as Romanian correspondents nouns that designate organized groups of people,

Table 2

ENGLISH

Classification	Examples	Semantics	Agreement	Gender	Individualization	Numericalization
A. NOUNS OF MULTITUDE	police poultry	[+ animal] [+ human]	Pl.		a member of	—
B. COLLECTIVE NOUNS PROPER	crew family	[+ human]	Sg/Pl		„	+
C. AMBIVALENT COLLECTIVE NOUNS	flock group	[+ human] [+ animal]	Sg/Pl			+
D. INDIVIDUAL NOUNS OF MULTITUDE	sheep the English	[+ animal] [+ human]	Sg=Pl			
E. NOUNS DENOTING MULTITUDE OF OBJECTS	fruit(s) coin(s) craft	[+ inanimate]	Pl.	N		(+)
F. SEMANTICALLY COLLECTIVE NOTIONS	heap leafage money advice	[+ inanimate]	Sg.	N	a piece of... am iten of...	±
G. GENERIC NOTIONS	cactus oak	[+ inanimate]	Sg.	N		

* The condition for the realization of the Pl. is [+ pl. determination]

apt to receive plural determinations, so as to achieve semantically variable agreement in the singular or plural.

e.g. *bandă* (gang, band) *de; colectiv de*; *detaşament de* etc.

(C) Ambivalent collectives in English (*flock, group*) have as Romanian equivalents nouns denoting number, measure, quantity, which may acquire a plural determination. We note that the semantic limits of realizing collectives differ in the two languages, Romanian accepting in this category not only the features [+human], [+animal] but also the feature [+animate].

(D) Varied collectives in Romanian (plural form) seem to be the equiva-

ROMANIAN

Category/Class	Examples	Semantics	Agreement	Gender	Individualization	Numericalization
—	—	—	—	—	—	—
COLLECTIVES DENOTING HUMAN	bandă, echipaj, detașament	[+ human]	Sg/Pl*	N/F	un membru al...	+
COLLECTIVES DENOTING NUMBER, QUANTITY	turmă, grup, mulțime, maldăr	[+ human] [+ animal] [+ animate] [+ inanimate]	Sg/Pl*	N/F		+
—	—	—	—	—	—	—
VARIED COLLECTIVES	brînz*eturi* pînz*eturi*	[+ inanimate]	Pl.	N		
COLLECTIVES DENOTING MULTITUDE OF ELEMENTS	frunziș bănet brădet rufărie	[+ inanimate]	Sg.	N/F		±
	popor tineret broștime	[+ animal] [+ human]				
GENERIC NOTIONS	floare poamă	[+ inanimate]	Sg.	F		

lents of the English nouns *fruit(s)*, *coin(s)*, with the only difference that Romanian formally rejects the singular, which has no collective meaning.

(E) Semantically collective nouns have an identical regimen in the two languages (concord with the verb being in the singular), but with the very important qualification that Romanian accepts in this category also nouns defined by the semantic features [+human], [+animate] which English rejects: *popor* (people, nation), *partid* (party), *broștime* (frogs).

(F) Nouns whose singular denotes generic notions (collective in meaning) behave similarly in both languages, therefore not warranting supplementary comments.

4.4.0. SEMANTIC-GRAMMATICAL CONSIDERATIONS

4.4.1. From the semantic point of view, Romanian collectives raise other problems than do English collectives.

First, it must be mentioned that the limits of realization of their "collective nature" are much broader in Romanian. While in English most collective nouns are characterized by the semantic features [+human], [+animal], in Romanian, vegetal and inanimate collectives hold a much more prominent place. *The fact that in Romanian the category of "collectiveness" is open to all elements that may be associated as parts within a whole is indisputably due to the poor grammatical implications of this matter and to the semantic emphasis laid on the idea of wholeness, of totality.*

The English grammaticized concord in the plural actually translates or interprets the semantic content of this category: in order to perceive the elements/members of a group, it is first of all necessary that they should manifest themselves, that they should display some activity, in a word to prove they are indeed *animate*.

4.4.2. Besides their collective meaning, Romanian collective nouns cumulate additional semantic values:

1) — *locative* — a) "a ground and the plants growing on it": *cînepişte* (hemp-field), *arinişte* (place overgrown with alder-tress)
b) "a place and the people inhabiting it": *mahalaua vorbeşte că*... (the suburb/neighbourhood say that...)
2) — *a large quantity of some material*:[14] *grohotiş* (scree), *fumăraie* (abundant smoke)
3) — *the value of a superlative* though with negative emotional connotations:[15] *cifrăraie* (overabudance of figures), *muscărime* (hosts of flies).

It must be remembered that in Romanian collective nouns offer a treasure-store of potential expresiveness with highly interesting stylistic effects.

4.5.0. *POLYSEMY*

Very much as in English, though not to the same extent, polysemy appears in the case of collective nouns:

e.g. *colegiu* 1. concrete, non-collective meaning = school building, college.
2. concrete, collective meaning = gathering (of experts, etc.), collegium.

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[14] F. Sădeanu (1962) includes among collectives also those denoting a large quantity of some material. Some of these interpretations as collectives seem to us a bit exaggerated: *plînsoare* (tearfulness, weeping), *ninsoare* (snowfall), *flăcăraie* (flames, conflagration), etc.

[15] Cîmpeanu (1975:221).

mahala 1. locative, non-collective meaning = suburb, neighbourhood; slum.

2. concrete, collective meaning = inhabitants of a neighbourhood, suburban people.

4.6.0. GENDER

As mentioned under 4.1.0., the gender of collectives in Romanian is subject to a dispute between neuters and feminines, a feature specific to the Oriental Romance languages. The fact is recorded in table 1.

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ON THE CLASSIFICATION OF ERRORS IN TRANSLATION PAPERS WITH SOME CONSIDERATION OF INTERFERENCE PHENOMENA[1]

H.-Ralf Steinbach

Universität-Gesamthochschule Paderborn

1. DIDACTIC AND LINGUISTIC PERSPECTIVES OF ERROR ANALYSIS

A systematic analysis of errors and/or mistakes[2] in foreign language learning is, in the first instance, a valuable asset for teachers. If students of the same mother tongue (base language — L1) tend to regularly misproduce certain patterns in the foreign language (target language — L2), this fact alone accounts for a closer review in order to draw conclusions for future classroom practice.

If such erroneous constructions are regarded as being the reflection of a systematic failure within the process of language production, reflecting something of the learner's individual competence, the didactic perspective of error analysis is complemented by a linguistic one, and the analysis of errors will perhaps allow conclusions regarding the nature and the process of language production in general. The study of the learner's language, also referred to as "interlanguage", "idiosyncratic dialect", "transitional competence" or "approximative system", would permit, one has reason to believe, some insight into the systematic character of language as such.

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[1] This is a revised version of the author's paper "Errors in German-English translation papers — an analysis of interference phenomena" presented at the 10th International Conference on Polish-English Contrastive Linguistics held at Boszkowo, December 13th—16th, 1978.

[2] The terms "error" and "mistake" will be used synonymously, and no distinction will be made between "errors of competence" and "mistakes of performance" (cf. e. g., Corder 1967).

Common to both the didactic and the linguistic perspectives of error analysis is the fundamental interest concerning the sources of errors. One possible or even likely source of errors in language acquisition is the phenomenon of *interference* (or *negative transfer*), i.e., the transfer of linguistic patterns (signs, rules, and meanings) to fields in which they are not valid. Related to foreign language acquisition, interference may be motivated by the negative transfer of L 1-patterns into the target language (*interlingual interference*), and by the possible over-generalization of linguistic patterns within the target language (*intralingual interference*).

The description system for errors introduced here neither aims at the learner's language expressing individual competence (cf. e.g., Corder 1971, 1972b; Nemser 1971; Selinker 1972), nor does it cover questions of error grading and remedy, which, we believe, are essentials of the didactic perspective of error analysis (cf. e.g., Nickel 1972). The aim is rather to provide a linguistically orientated system for the description of translation errors with regard to their nature, frequency and possible sources, and under the particular aspect of interference. Following the introduction of the system, we will demonstrate some of the results achieved in a practical analysis of 25 German-English translation papers.

2. THE CLASSIFICATION AND DESCRIPTION OF TRANSLATION ERRORS

2.1. For the classification and description of translation errors a rating from two parallel viewpoints appears to be adequate: one level of analysis (Lexis) is constituted by the given meaning in L1 and the related choice in L2, whilst a second level (Grammar) covers acceptability in L2 independent of the meaning in L1:

(1a) L1 Wir haben uns immer *gegen* ... *gewandt*.
(1b) L2 *We have always *restrained against* ...

Independent of the German original, (1b) is grammatically incorrect:

(1c) L2 restrain *sb./sth. from*

Furthermore, there is a confusion of meaning (a lexical error):

(1d) L2 *restrain* sb./sth. *from*
L1 jdn. etw. *zurückhalten von*

instead of

(1e) L2 e.g. *to be opposed to*
L1 *sich wenden gegen*

Along with an error count every mistake registered may be classified according to a 'level of error', a 'type of error', and then categorized into 'groups of errors'.

2.1.1. Following the traditional levels of linguistic description we can establish *levels of error* by means of the following criteria:

ORTHOGRAPHY	Infringement of established BE- or AE-spelling.
GRAMMAR	(Here regarded as a general term comprising the levels of morphology and syntax.)
Morphology	Non-acceptable word-formation within the given L2-sentence pattern.[3] (Errors in the selection and the use of derivational morphemes and errors in word compounding).[4]
Syntax	Non-acceptable sentence formation within the given L2-pattern. (Errors in the selection and the use of inflexional morphemes and free grammatical morphemes, plus errors in the connexion of grammatical and lexical morphemes.)
LEXIS	Non-acceptable expression of L 1-meaning in L2. (Errors in the selection of grammatical and lexical morphemes, without grammatical infringement of L2-rules, but causing a meaning that when translated back into L1 differs considerably from the original.)

2.1.2. A classification by *types of error* might incorporate the system suggested by Corder (1972a: 39f.), employing the following criteria:

ADDITION	Attachment of an unnecessary linguistic element.[5]
OMISSION	Elision of a necessary linguistic element.
SELECTION	Choice of an unacceptable linguistic element.
ORDERING	Non-acceptable order of acceptable linguistic elements.

2.1.3. The allocation of one and the same mistake to two different registers (level and type of error) permits the construction of a *classification matrix* (cf. Corder 1972a: 40) that by means of cross-checking also ensures a correct registration of data in terms of quantity. For practical reasons of notation, symbols should be used that facilitate the categorization of errors and the subsequent data processing.

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[3] Word-formation in accordance with Quirk et al. (1972: Appendix I).

[4] Classification and definitions of morphemes according to Welte (1974 : 392f.).

[5] The term *linguistic element* stands for graphemes, morphemes, syntagma, and lexemes.

Table 1. Classification matrix and notation symbols

	Type of Error			
	ADDITION	OMISSION	SELECTION	ORDERING
ORTHOGRAPHY	O+	O–	OS	OO
GRAMMAR				
Morphology	M+	M–	MS	MO
Syntax	S+	S–	SS	SO
LEXIS	L+	L–	LS	LO

Symbol	*Level of Error*	*Type of Error*	**Example*
O+	ORTHOGRAPHY	ADDITION	periods
O–		OMISSION	exil_
OS		SELECTION	seperation
OO		ORDERING	lettre
M+	MORPHOLOGY	ADDITION	comfortab*ly* (adj.)
M–		OMISSION	*comfortable* (adv.)
MS		SELECTION	beriched (enriched)
MO		ORDERING	*hypodronics* (f. *hydroponics*)
S+	SYNTAX	ADDITION	in all *the* modesty
S–		OMISSION	(Ø *the*) last survivors of)
SS		SELECTION	help defend*ing*
SO		ORDERING	*the newly to be built house*
L+	LEXIS	ADDITION	a *new* task (L 1: eine Ø Aufgabe)
L–		OMISSION	a Ø task (L 1: eine *neue* Aufgabe)
LS		SELECTION	*writing-machine* (L 1: *Schreibmaschine*)
LO		ORDERING	Paraphrases inducing a change of meaning

2.1.4. Corder (1972a:40) rightly points out that a classification of errors in terms of "level" and "type" alone must be regarded as too superficial. It is said that a sufficiently deep and systematic classification should incorporate the "system of identification or specification", i.e. tense, number, aspect, etc. Within the framework of the description system introduced here, *groups of errors* were established, following the criteria just mentioned. In some cases, however, we felt that the categories provided by the error matrix are of satisfactory depth. So, for example, errors in word-order are adequately covered by SO. L-, in turn, shows which meanings of L1 do not re-appear in L2, whilst L+ reveals added meanings in L2. The real problem lies with syntactic and lexical errors of selection (SS and LS), as by far the highest proportion of mistakes has to be expected in these fields. On the lexical level of analysis the L1-lexeme seems to be the only practical criterion for further classification. On the grammatical level (morphology and syntax) groups of errors may be established following the sections of a sufficiently detailed grammar book such as the *Grammar of contemporary English* (Quirk et al. 1972), its shorter version the *University grammar of English* (Quirk, Greenbaum 1973), or any other work perhaps considered more suitable for the individual task of instruction.

2.2. Based upon the assumption that linguistic competence in one or several languages (L1 ... Ln) influences positively *and* negatively the acquisition of a second or further language (L2 ... Ln), the following catalogue of possible *sources of errors* was developed:

1. IL 1-D *Direct interlingual interference*

Negative transfer of a linguistic element or pattern from L1 into L2, motivated by an assumed equivalence in form, function or meaning, when context-independent or context-dependent non-equivalence in L2 is the case. Examples:

L1 Exil	L2 *exil
bereichert	*beriched
das neu zu erbauende Haus	**the newly to be built house*
*Schreib*maschine	**writing*-machine

1a. IL 1-L 2 *Indirect interlingual interference*

Negative transfer of a linguistic element or pattern within L2, motivated by an assumed equivalence in form, function or meaning, when context-dependent non-equilavence in L2 is the case, and the corresponding element or pattern in L1 is non-existent or less differentiated.

Examples:

L1 *aber* sie hörten nicht auf	L2 *but* they did not stop
darum hörten sie nicht auf	*therefore* they did not stop
aber darum hörten sie nicht auf	**but therefore* they did not stop
innere Angelegenheiten	*internal* affairs
inneres Exil	**internal* exile

2. IL 2-D *Direct intralingual interference*

Negative transfer of a linguistic element or pattern within L2, motivated by an assumed equivalence in form, function or meaning, when context-dependent non-equivalence in L2, and context-independent non-equivalence in L1 is the case.

Examples:

L2 practic_e_ (n.)	L2 practi_se_ (v.)
defenc_e_ (n.)	*defen_se_ (v.)
con_tribute_ to	*at_tribute_ to
(L1 : beitragen zu)	(L1 : zuschreiben)

2a. IL 2-P _Intralingual interference avoiding positive transfer_

Negative transfer of a linguistic element or pattern within L2 when positive transfer L1 → L2 would have been possible.

Examples:

L1 Separation	L2 *seperation (separation)
verteidigen _mit_	*defend _by_ (d. _with_)
Architekt	*_constructor_ (_architect_)

3. SIM _Simplification_

Omissions of meanings required by L1 and sense-infringing paraphrases in L2.

(Defined by means of back-translation.)

Examples:

L1 Schreckens _herrschaft_	L2 *terror (ø _reign of_)
Kultur_bestände_	*_things_ of culture (L1 : kulturelle _Dinge_)

4. DIV _Miscellaneous_

Errors that cannot be classified by means of 1 - 3 above.

Example:

L1 _Schreibmaschine_	L2 *_typing-machine_

(Patterns that can neither be fully related to the primary nor the secondary system; cf. Czochralski 1971:6 — "strukturelle Entgleisung")

Together with Dušková (1969:16) we believe "that an error analysis should be based primarily on recurrent, systemic errors that are made by a number of learners and that can be readily traced to their sources, no matter whether they reflect defects in knowledge or whether they result from inadequate habit formation." We therefore suggest that the catalogue outlined above should only be applied to recurrent mistakes.

2.3. A multiple classification of errors with regard to their level, type, group and source brings about a number of classificational problems concerning the _demarcation_ of the individual categories. In many cases such questions can only be decided subjectively, and the following remarks refer to proceedings used for the actual analysis outlined below.

In cases of doubt concerning the relevant point of error the analyst proceeded from left to right, i.e. taking the first possible point of mistake. Furthermore, the functional aspect of a morpheme (e.g. of a preposition) was given priority over its lexical meaning, thus differentiating Grammar from Lexis. For cases such as

(2) L1 *ein* Anrecht auf → L2 *the right to

a separate category "Errors in lexico-syntactic Selection" was established under the heading of Lexis, as such mistakes result from a change of meaning caused by a grammatical morpheme but leaving the L2-pattern acceptable. The range of error sources was applied in the given sequence of order, i.e. higher ranking types were given priority in case the erroneous pattern allowed different interpretations.

3. THE SYSTEM IN PRACTICE

3.1. The analysis was carried out on 25 English translations of a German text (230 words, literary style) which had been prepared by students of English sitting for their intermediate examination at a German university. The papers analysed had been corrected and graded by two English-speaking lectors ("native speakers" with a solid command of German). As regards the marks achieved by the students, the sample correctly represented a total of some 100 papers.

The decision on which translation patterns were to be regarded as erroneous was based upon the correctors' marks, i.e. the precondition for the inclusion of an error into the analyses was the judgment of native speakers that considered the system of the target language to have been infringed upon. No distinction was made between *not acceptable and ?questionable constructions. By means of a second correction procedure assisted by an independent native speaker of English, obvious oversights were marked, and repetitive errors (identical mistakes within the same paper) were consistently excluded.

3.2. Excluding repetitive mistakes, the error count registered a total of 806 mistakes which were distributed over the error matrix as follows:

Table 2. Distribution of errors registered

	ADDITION	OMISSION	SELECTION	ORDERING	Total
ORTHOGRAPHY	11	13	19	—	43
GRAMMAR	47	44	167	43	301
— Morphology	7	11	10	—	28
— Syntax	40	33	157	43	273
LEXIS	16	41	388	17	462
Total	74	98	574	60	806

Within the limited scope of this presentation it is obviously not possible to comment on the results in detail. The following points, however, should be noted:

3.2.1. The comparatively small number of orthographical errors indicates that the student on the whole has mastered the difficulties entailed in English spelling. Mistakes in punctuation were excluded from the analysis; it was noticeable, though, that either hardly any commas were used or the German rules of punctuation were applied.

3.2.2. Within Morphology (word-formation) the focus of errors was the use of the suffix *-ly*:

(3) L1 adj. wohn*lich* → L2 *adj. comfortab*ly*
(4) L1 adv. *neu* → L2 *adv. *new*

Example (3) gives sufficient reason to believe that the German suffix - *lich* generally speaking is identified with the English suffix *-ly*, thus causing a confusion of adjective and adverb. This claim is supported by the fact that the absence of an adverb suffix in L1 (which is usually the case) seems to lead to the same effect in L2, as example (4) demonstrates. Other recurrent errors on the morphological level had to do with prefixes, for example:

(5) L 1 *be*reichert → L 2 **be*riched
Here again the German influence is obvious.

3.2.3. Over two thirds of the mistakes registered under Syntax were accumulated by the following groups of errors:

Table 3. Major fields of syntactic errors

Error Group	*% of Syntax*
Prepositions	22
Determinants	20
Word-order	16
-ing-form	9
Total	67

In terms of grammar book chapters, mistakes occurred most frequently from the wrong positioning of the adverb or the adverbial phrase, from using the definite article in cases of generic reference, from choosing another preposition when *for* or *to* were required, from not using the *-ing*-form, and from choosing a wrong pro-element. This list accounts for 42 per cent of all syntactic mistakes.

3.2.4. Over three quarters of the mistakes listed under the heading of Lexis resulted from non-acceptable selections of L 2-patterns. A total of over 40 per cent of all errors in Lexical Selection (LS) was related to 7 single structures of the German text, and in the majority of cases the interference constellation IL 1-L 2 turned out to be applicable.

3.3. It has already been indicated that by far the most frequent type of error was that of Selection (Lexis 85%, Grammar 55%). The ratio of recurrent mistakes (545) to nonce mistakes (261) varied substantially according to the different levels of analysis: in Grammar the proportion of recurrent mistakes to nonce mistakes was 4 to 1, in Lexis this ratio was only 1.5 to 1.
A similar fluctuation had to be noted as regards the likely sources of errors:

Table 4. Sources of errors (per cent distribution)

		Grammar		*Lexis*	
IL 1	IL 1-D	64		8	
	IL 1-L 2	9	73	41	49
IL 2	IL 2-D	2		7	
	IL 2-P	25	27	1	8
	SIM	–		33	
	DIV	–	–	10	43
	Total	100	100	100	100

As one can see, interlingual interference (IL 1) plays an important part in both Grammar and Lexis. However, whereas in Grammar almost two thirds of all analysed errors (recurrent mistakes only) could be related to direct interference (IL 1-D), it was indirect interference (IL 1-L2) that accounted for most of the mistakes in Lexis:

	L 2
(6) L 1 *Geist*	*spirit* *mind* *intellect* *ghost* *brains* and others
(7) L 1 *Freiheit*	*liberty* *freedom*
(8) L 1 *geistige Freiheit*	**mental liberty* (5/25)[*] **spiritual liberty* (4/25) **freedom of mind* (4/25) *intellectual freedom* (3/25) **mental freedom* (3/25) **liberty of mind* (2/25) **freedom of spirit* (2/25)

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[*] Frequency of occurrence in 25 translation papers.

This type of interference constellation ("lack of contrast" — under-differentiation of a linguistic element in L 1 causes over-generalization of a linguistic element in L 2) turned out to be the main source of lexical errors. As concerns this level we can therefore fully confirm Juhász's statement that this phenomenon, Juhász calls it "homogene Hemmung", causes the greatest and most apparent difficulty in foreign language learning (cf. Juhász 1970 : 99).

Intralingual interference without an assumed relation to the base language (IL 2) in Grammar could explain about a quarter of the mistakes analysed, in Lexis less than one tenth. It is interesting to note that one quarter of the grammatical mistakes would have been avoided if a direct transfer pattern (a one-to-one translation) had been chosen (IL 2-P).

One third of the lexical errors analysed were regarded as Simplifications (SIM). From this category one could perhaps infer a lack of competence in the target language, similar to what Corder (1967 : 166) calls "errors of competence".

Only some five per cent of all recurrent mistakes could not be explained adequately by means of the suggested list of sources of errors, and therefore had to be registered as Miscellaneous (DIV).

3.4. Besides the fact that from a statistical point of view the small size of the sample does not permit any statement valid beyond the framework of the actual analysis, the results put forward are restricted by some further limitations of the research material.

The value of a translation paper for an analysis of interference phenomena is said to be questionable because of the translator's actual awareness of the interference situation (cf. Nickel 1973 : 26). This argument is perhaps supported by the considerable share of avoided positive transfer situations (IL 2-P), in which the student might have chosen something different from German in order not to commit an interference mistake. On the other hand, it could be argued that a translation brings about the closest possible contact situation between L1 and L2, thus causing and revealing interfered patterns more readily:

(9a) L1 Sie hörten nicht auf, *Schrifsteller* zu sein.
(9b) L2 *They did not stop being *a writer*. (Registered in 8 of 25 cases)

One must assume that a university student of English is aware of the rules concerning subject-complement concord. Now it seems to be obvious that for some reason he is unable to apply his knowledge of these rules under all circumstances, and one could assume that the ø-plural in L1 *Schriftsteller* supresses the plural form in L2, letting the student choose the 'singular' form instead. In our opinion this sort of L 1-interference constitutes a type of error that can neither be regarded as a systematic deficiency of competence nor as an unsystematic lapse of performance (cf. Corder 1967:166). Such errors could perhaps be explained by a context-dependent inability of the learner to apply his linguistic competence, a systematic loss of cognitive control over linguistic performance due to interference of the base language (cf. Burgschmidt, Götz 1974:135 f.).

Other deficiencies in the evidence of the analysis result from the specific structure of the translation text used. The German original contained, for instance, numerous constructions that demanded a deviating use of articles in English. On the other hand, not a single pattern required a *if*-clause in the target language. Concerning Lexis, a total of nine, partly word-for-word repetitions had to be noticed. It is natural fact that a language test and a subsequent analysis of test results are limited by what is to be tested, and it is the design of language tests that first of all wants careful consideration if the didactic and linguistic perspectives of error analysis are to fulfil what they appear to promise.

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PROBLEMS IN ERROR ANALYSIS

LEWIS MUKATTASH

The University of Jordan

1. INTRODUCTORY

The aim of this paper is twofold. First, to present a brief description of a research project on error analysis that was begun at the University of Jordan in 1976, and secondly to list some of the linguistic problems and other problems in methodology and analysis which the present writer has encountered while engaged in this research project.

My work in error analysis arose in the first instance from a recognition that Jordanian students of English progressively establish wrong linguistic habits, and that by the time they reach the university they have acquired a good number of errors. It also arose from a recognition that many of these errors are systematic and form definable patterns, and that a study of such errors may have both theoretical and pedagogic significance. To be more precise, my work or error analysis started out with the same aim as most similar investigations: i.e. an inventory was to be made of the grammatical errors found in the English of Jordanian students in order to form a basis for more efficient English-language teaching in Jordan, in particular at the post secondary level. I was first interested in the English produced by first year students at the University of Jordan, but at a later stage the research project was extended to study the performance of Jordanian students in secondary schools and teachers' training institutes.

2. SCOPE OF COMPLETED RESEARCH

2.1. PHASE (I): PILOT PROJECT

The research was begun in January 1976 and completed in September 1977, and it consists of four studies that were carried out independently of each other, and thus may be considered to complement each other.

2.1.1. *First Study*

This study (Mukattash, 1980) is based on the analysis of 6000 Yes/No questions produced in writing (in January 1976) by 600 first year students at the University of Jordan in an attempt to discover what mistakes they make in forming such questions.

Analysis of the data showed that 1516 questions were erroneous, either ungrammatical or inappropriate. Some students made the mistake of producing *Wh*-questions instead of Yes/No questions. The number of such *Wh*-questions was found to be 383, 300 of which were ungarmmatical. All the *Wh*-questions were ignored and this leaves us with 1133 erroneous questions: 18.9% of the overall number of questions. Certain erroneous questions contained more than one error and the overall number of errors was found to be 1237.

All errors were categorized and described. An attempt was also made to account for the source of errors including interference from the mother tongue. The following table shows the type and frequency of the errors described in this study:

Table I

Type of error	Number	Per cent
1. *DO* redundant	127	10.3
2. *BE* redundant	73	6.0
3. *DO* replacing *BE*	24	1.9
4. *BE* replacing *DO*	115	9.3
5. Verbal form	343	27.7
6. Tense	117	9.4
7. Word order	190	15.3
8. Inversion without *DO*	36	2.9
9. Concord	29	3.3
10. Auxiliary Deletion	57	4.6
11. Miscellaneous	126	10.2
Total	1237	100%

2.1.2. *Second Study*

The findings described in this study (see Mukattash 1978b) are based on a preliminary analysis of 4000 *Wh*-questions produced in writing (in June 1976) by 400 first year students at the University of Jordan, (J. U.).

Of the 4000 questions, 1592 were found to be erroneous (either ungrammatical or inappropriate), and the overall number of errors was found to be 1790.

This study is mainly concerned with two issues, namely: word order and auxiliaries. Other errors like verbal forms, concord and auxiliaries are listed but not discussed since they are discussed in the preceding study. All errors involving word order and auxiliaries are discussed in detail. An attempt is also made to account for the sources of errors including interference from the mother tongue. The number of errors that involved word order and/or auxiliaries was found to be 788, of which no substantial examples are definite instances of L1 interference.

The following table shows the type and number of errors made in the 4000 ***Wh***-questions:

Table II

Type of error	Number	Per cent
1. Word order	437	24.4
2. Auxiliary omission	154	8.6
3. *BE* redundancy	18	1.0
4. *BE* replacing *DO*	27	1.5
5. *DO* redundancy	73	4.0
6. *DO* replacing *BE*/Aux	79	4.4
7. Verbal form	161	9.0
8. Tense	69	3.8
9. Question words	488	27.0
10. Inappropriate questions	163	9.0
11. Miscellaneous	121	6.7
Total	1790	100%

2.1.3. *Third Study*

This study (Mukattash 1978a), deals with the identification and description of 1411 grammatical errors contained in fifty essays chosen randomly from 200 essays written by first year students at the University of Jordan in October 1977.

The overall number of sentence used in the fifty essays was found to be 1618, 639 of which are simple sentences and 979 complex ones. The percentage or erroneous sentences was 39.8%.

The texts were corrected not only by the author but also by a native speaker of English. Table III below shows the type of errors, their frequency of occurrence as well as the percentage of each type of error to the overall number of errors in the fifty essays. It can be seen that the bulk of mistakes (81.9%) fall into four major categories: Verbals, Articles, Nominals and Prepositions. This is, however, not surprising since these items are possibly the ones most used in the language.

The mistakes under each of the categories in Table III below were further sub-categorized and described. Errors tat were thought to be cases of L1 interference were found to be 331, that is to say 29% of the overall number of errors.

Table III

Categories	No. of errors	Per cent
1. Verbals	409	29.0
2. Articles	306	21.7
3. Nominals	228	16.2
4. Prepositions	211	15.0
5. Relatives	51	3.6
6. Adjectivals	38	2.7
7. Pronouns	38	2.7
8. Sentence Connectors	37	2.6
9. Quantifiers	29	2.1
10. Adverbs	29	2.1
11. Structure	18	1.2
12. Modals	17	1.2
Total	1141	100%

Admittedly, the percentages of errors in Table III above may be misleading: it is more revealing to look at errors as a percentage of usage, and this was done in certain cases. For instance, the percentage of errors involving the use of Modals to the overall number of errors (i.e. 1.2%) might be interpreted as meaning that Modals do not cause difficulty to Jordanian students. Actually, it is just the opposite. A usage count of the number of times the Modals were/ /should have been used was carried out, and this number was found to be 178; which means that the percentage of errors to usage is 9.6%, an indication that Modals are difficult.

2.1.4. *Fourth Study: a semi-objective test*

This test was given to over one thousand first year students at the University of Jordan. Five hundred answer sheets representing students from all faculties and all districts in Jordan were chosen for analysis.

The test included 170 items and covered eight areas of grammar. The answers were marked, coded and subjected to computer analysis. The following table shows the number and percentage of the errors made in each area. Furthermore, it shows the "absolute difficulty" of the errors under each category (the term "absolute difficulty" means the percentage of errors involving the use of a certain grammatical structure/form to the number of times that particular grammatical structure/form was used or should have been used):

Table IV

Category	1 No. of items	2 No. of errors	3 Percentage	4 Absolute difficulty
1. Verbals (including gerunds & infinitives)	50	17461	37.6	69.8%
2. Prepositions	40	10667	23.0	53.3%
3. Articles (including *some* & *any*)	43	9755	21.0	45.3%
4. Modals	10	2703	5.8	54%
5. Adverbs	9	2256	4.9	50.1%
6. Connectors	9	1931	4.2	42.9%
7. Quantifiers	5	1156	2.5	46.2%
8. Relative Pronouns	4	541	1.1	27%
Total	170	46470	100%	–

As in the case of the preciding study, the errors under each category were further sub-classified and all types of substitutions were discussed.

It ought to be pointed out in this connection that this test was written before the author had any clear results from the free compositions concerning the type and frequency of errors. The items tested were thought-on purely impressionistic grounds — to be the most problematic areas in English grammar for Jordanian students.

2.2. PHASE II

2.2.1. *Aims and Methodology*

The aims of the second phase of the research may be summed up as follows:

(i) The validation of the survey instruments and the finidings of the Pilot Project, which suggest that grammatical mistakes of Jordanian students are most evident in the following areas, in descending order of difficulty:

1. The verbal system, especially with reference to tense and aspect
2. Prepositions
3. Modals
4. Adverbs
5. Quantifiers
6. Articles
7. Sentence Connectors

(ii) Establishing the existence of "competence" errors in Jordanian English as opposed to "performance" mistakes caused by situational constraints of test administration and other extraneous factors.

(iii) Surveying the gamut of the school-leaving population — as opposed to the very small percentage which enters the University — to indicate the extent to which the latter group is representative of this age-group, and to discover and describe any variation in English language proficiency according to sex, region, type of school, type of curriculum, educational and social backgrounds, etc.

(iv) The explanation of the sources and causes of prevalent grammatical errors.

(v) The remediation of the prevalent grammatical errors by the construction of programmes of study the data for which will be provided by the findings at (i), (ii), and (iv) above. (The programme of study constitutes the final phase of the research and will be started and tested next academic year).

This research was begun in November 1977. The first step was the construction of a new test informed by the results of the Pilot Project.

The first version of the test, an objective one, consisted of 360 multiple-choice items which were tried out for purposes of pretesting and item analysis on 200 students representing all faculties in the University. All questions were based on the English Language syllabus used in government secondary schools. All items were analyzed to determine their effectiveness in terms of three criteria: item difficulty, item discrimination, and the effectiveness of distracters. Furthermore, items that included nonfunctioning and malfunctioning distracters were all excluded from the final version.

The final version of the test consisted of 150 multiple-choice items covering eleven different areas of English grammar (see Table V below). The validity and the reliability of the test proved to be very high indeed.

The administration of the test was first begun in January 1978 and it lasted for three months. The test was given to 4835 students representing three main groups of students' population: university, teachers' training institutes, and secondary schools (final year students) all over the country. The number of students is distributed as follows: 940 from the University of Jordan, 513 from five teachers' training institutes, and 3382 from 48 secondary schools in 13 geographical areas.

2.2.2. *A Preliminary Analysis*

After each administration of the test all answer sheets were checked and coded. The answers were then marked by the computer at J. U.. For each question we were able to get the number of examinees who answered the question correctly as well as the number of examines who used each of the other three distracters, and the number of examinees who did not answer the question at all. Afterwards we were able to calculate the facility index (I.F.) for each item and the facility index for all items in each of the eleven grammatical areas that comprised the test.

The following table shows us the facility index for each of the eleven grammatical areas arranged in descending order of difficulty:

Table V

Area	No. of items	Facility
1. Quantifiers	12	0.37
2. Adverbs	12	0.38
3. Verbals	35	0.40
4. Sentence Connectors	11	0.44
5. Nominals	10	0.45
6. Prepositions	24	0.46
7. Modals	9	0.48
8. Relatives	8	0.48
9. Adjectivals	8	0.50
10. Articles	15	0.52
11. Pronouns	6	0.56

As in the case of previous studies all prevalent mistakes were decribed, and an attempt was made to account for their occurrences. Furthermore, an attempt was made to establish the relationship between the student's competence in English and some social and educational factors: age, type of school, district of schooling, sex, educational background, etc. (see Mukattash, forthcoming).

3. PROBLEMS OF STATEMENT AND METHODOLOGY

In what follows I shall briefly discuss some of the main problems which I have encountered over the last four years while engaged in the analysis of prevalent grammatical mistakes in Jordanian English.

3.1. THE CLASSIFICATION OF ERRORS

One of the most serious problems that face a researcher working in the field of error analysis is the description and classification of errors. Admittedly, some errors lend themselves easily to description and classification (e.g. the replacement of one preposition by another, the inappropriate use of the definite article *the* in front of proper names), but others do not. To explain the point under discussion, let us begin by considering the mistakes in the following three examples produced by first year students at the University of Jordan:

(1) This lay in the *southern*
(2) If we want to make our country attractive to the *foreigns* we must pay a great attention to the subject.
(3) In *agriculture* field, we see the difference between agriculture in these days and in the last days.

What is involved here is the inappropriate use of a noun instead of an adjective and vice versa. But is this a syntactic error or a morphological one, or is it a lexical one? Another question that one would like to pose in this respect is: What are the causes of the errors in these deviant sentences? Contrastive analysis (Arabic and English in this case) may account for the mistake in (3) but not the mistakes in (1) or (2).

By way of further exemplification, let us consider the mistake in the following example:

(4) Most *of people* work in trading

The mistake here may be looked at from two different angles: first, inappropriate deletion of the definite article *the* (viz. *Most of the people work in trading*); secondly, redundant use of the preposition *of* (viz. *Most people work in trading*). Out of context, and without reference to L1, it would be difficult to prefer one alternative to the other. As it happens, a comparison between L1 and L2 would make us favour the first interpretation, for this reflects the facts of L1. But resource to L1 is not always helpful. How can we describe the mistake in:

(5) *The another* cause for this custom is their culture.

Again, the mistake here may be interpreted in two different ways: (i) the use of *another* instead of *other*, and (ii) the redundant use of the definite article *the*. Resource to L1 is not helpful in this particular case, for both interpretations are possible in Arabic.

A somewhat different problem can be exemplified by the following deviant sentences:

(6) The television *has just repaired* and it is working very well
(7) When the manager arrived, he found that the safe *had opened* by the thieves.

At first sight, one is tempted to view the mistakes in the preceding two examples as ones in "Voice" (i.e. the use of the active voice instead of the passive). But this is not necessarily the case. In fact, it is not clear whether we should consider these mistakes as mistakes in "voice" or in "form". Most probably they are mistakes in "verbal form". This observation is based on two facts. First, the two contexts in (6) and (7) above require the use of the passive form of the verb in Arabic. Secondly, there are mistakes in the opposite direction, where the Arabic context requiers the use of the active voice: cf.

(8) They *are sung* because they have passed their exams
(9) Education in Jordan *has been reached* a high level because you will find schools in every village

The only way to decide whether these are mistakes in "voice" or "form" would be to ask the individuals who produced such sentences to translate them into L1.

3.2. SOURCES OF ERRORS

If the description of errors proves to be difficult, the justification of their occurrence is certainly more difficult. Again, one must admit that certain errors may be easily accounted for in terms of L1 interference or in terms of intralingual interference, but certainly there are errors which are difficult to account for, and it would not be very helpful to refer to such errors as "ambiguous goofs". This statement is based on the following observations:

(i) Many of the grammatical errors which Jordanian students make have been recorded to have been made not only by children acquiring English as their mother tongue, but also by foreign learners of English with different language backgrounds. One of the most prevalent mistakes in Jordanian English involves word order in *Wh*-questions. The following are illustrative examples (Mukattash, 1978b):

(1) *What the group is doing?
(2) *How the students are studying?
(3) *When our friends will arrive?
(4) *Where Mrs. Smith was cooking?

What is involved here is the absence of the obligatory inversion of the auxiliary and the subject NP. At first sight, one might fall under the impression that the errorneous questions above are direct translation from Arabic. Indeed, the word order of the deviant questions above reflects the structure of both Modern Standard Arabic and spoken Jordanian Arabic. In fact I did discuss these mistakes with some colleagues who have been teaching English at the university level for a long time, and they unanimously believed that the deviant questions listed above are cases of L1 interference. But such deviant questions which include the absence of inversion of the auxiliary and the subject NP have been noticed to occur in the speech of children whose native language is English. Menyuk (1969 : 75–6) cites the following examples:

(5) a. *What you are writing?
b. *Why they are here?
c. *What they are doing?

Dulay and Burt (1974 : 111) also cite similar examples:

(6) a. *When John will read the book?

What adds to the complexity of the situation is that deviant questions like the ones produced by Jordanian students (i.e. 1—4) are reported to have been made by foreign learners with different language backgrounds. Ravem (1974 : 141) records the following *wh*-questions produced by his children whose L1 is Norwegian:

(6) b. *What he's doing?
c. *How they can't talk?

Richards (1974 : 187), on the other hand, records similar deviant questions produced by native speakers of various languages (Japanese, Chinese, Burmese, French, Czech, Polish, etc.): cf.

(7) a. *What she is doing?
b. *When she will be fifteen?
c. *Why this man is cold?

(ii) I examined many of the deviant sentences recorded in Jain (1974 : 208—13) which were produced by Indian students whose L1 is Hindi, and discussed these sentences in the classroom. In most cases my students made the same mistakes, and when I discussed these mistakes with them, they thought that many of these errors were caused by interference from Arabic. The following is a representative sample:

(8) a. The girls need three more *scissors*
b. I *was seeing* all this happen in front of my own house.
c. Entry will be by *tickets*
d. We *enjoyed* at the theatre for two hours

(iii) Many of the mistakes which Richards (1974 : 182—88) reports to have been produced by speakers of different languages are also prevalent in Jordanian English. Here are some typical errors in the verbal system:

(9) a. Be+V // V
*We *are live* in this hut
b. M+V — en // M+V
*I *can saw* it
c. V — en // Be+V-en
*He *born* in England

d. V-ing // Be+V-ing
   *They *running* very fast
e. V-ing // V-en
   *I *am interesting* in that
f. Be+V-ing // V
   *I *am not liking* it

Other mistakes involving the use of prepositions, articles and auxiliaries, which Richards reports are also typical of Jordanian learners of English: e.g. *reach at a place; at the evening; angry on him; play on the piano; entered in the room; the friendship; after the breakfast; the science; did he went*, etc.. Indeed, I would have considered many of the mistakes which Jordanian learners of English make to be cases of L1 interference were it not for the fact that many of these errors have been recorded to have been made by other foreigners with different language backgrounds and by children acquiring English as their mother tongue.

3.3. DEGREE OF ACCEPTABILITY

A third problem that faces a researcher working in the field of error analysis is determining the accepability of a given utterance. This is particularly true if the researcher is not a native speaker of the target language. For example, some of the erroneous sentences listed in Jain (1974 : 210) and Richards (1974 : 185) have been judged by some native speakers to be perfectly acceptable. Here are some examples:

(1) I *am having* a very heavy work-load this semester
(2) I *was feeling* as if I was in a hell
(3) She has *a* very important *work* to do
(4) He *said* that there *is* a boy in the garden
(5) I met *with* her

Secondly, I myself have had a difficult experience with two research assistants who are native speakers of English (one is a native speaker of British English and the other a native speaker of American English). The two are linguistically trained, but quite often they disagreed with respect to the acceptability of a good number of sentences. Each of the following examples was attested by one and rejected by the other:

(6) They cannot perceive *of* the difference
(7) Mr. Smith left *to* England yesterday
(8) I *didn't see* him since Christmas
(9) The professor spoke *with* a high voice

(10) We decided to go to the beach *by* foot
(11) I prefer this book *than* that one

Thirdly, there are problems in the opposite direction, namely determining the acceptability of sentences in the mother tongue (Arabic in this case). In fact, this proved more difficult than determining the acceptability of English sentences. This is due to two factors. First, Modern Standard Arabic is rarely used in everyday life and is restricted to very formal situations; and though most educated Jordanians have a passive knowledge of the language, the overwhelming majority of them cannot speak the language with any reasonable degree of fluency. Secondly, there are many dialectal variations in Jordan, which display differences on all linguistic levels. Thus it would not be possible for a researcher to decide on the acceptability of a given utterance in Arabic; and consequently it would not be possible for him to determine whether a given mistake in Jordanian English is a function of L1 interference or not.

3.4. PROBLEMS OF METHODOLOGY

It is quite obvious to any researcher working in the field of error analysis that no one testing technique or elicitation procedure is adequate for the purposes of the specification, description and justification of prevalent grammatical errors in the second/foreign language of any speech community.

The shortcomings of any testing technique will become abvious only after one begins to analyse his data. Generalizations based on the use of one test-type are bound to be inaccurate and misleading. Briefly, various types of tests are to be used in order to neutralise the extraneous factors which are involved when any one is used exclusively. Furthermore, for any generalization to be reasonably valid, various testing techniques are to be employed systematically within the same grammatical area.

Secondly, there are other questions which one would like to pose with respect to the informants who provide the linguistic data: (i) How many informants does one need in order to be able to make reasonable generalizations about the "competence" errors in the foreign/second language of a particular speech community?; (ii) What type of informants should a researcher choose (e.g. students, friends, people who use the foreign language regularly!)?; (iii) How can one guarantee that his informants will co-operate, taking into consideration the time and effort needed?; (iv) Should the various testing techniques be used over a short or an extended period of time? As far as I know, none of these questions has been adequately answered so far.

Thirdly, in any research in error analysis, certain socio-linguistic and psycho-linguistic factors should be taken into consideration. Such factors include (i) the age at which the student begins to learn L2; (ii) the learner's linguistic and cultural background; (iii) the status of the mother tongue; (iv) the learner's attitude towards L2 and its speakers; (v) the relevance of L2 to the learner's needs and objectives; (vi) the prestige of L2 locally; (vii) the learner's first experience with L2; (viii) the textbooks used and the objectives of the syllabus; (ix) methods of teaching; (x) modality of exposure to L2; (xi) individual differences in language aptitude, intelligence, interest and perseverance. Other factors that are relevant in this respect are: (1) the type and calibre of the teachers of L2; (2) the attitude of L2 teachers to the teaching profession in general; (3) the nature of the educational system in the country (see Mukattash, forthcoming, and the references he cites).

To conclude this paper, there seems to be no way of proving that any given error-type has a specific cause, whether this be L1 interference, learners' communication strategy, or target-language interference. The most that can be claimed is that any given error-type can be plausibly attributed to one, or to a combination, of these causes. Progress in the resolution of such indeterminancy can only be assayed as James (1978) suggests "through small-scale in-depth psycho-linguistic research".

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TEACHING ARABIC EMPHATICS TO THE ENGLISH LEARNERS OF ARABIC[1]

Edward Y. Odisho

Al-Mustansiriyah University, Baghdad

In teaching the Arabic language to native speakers of English it has been found that:

1. The vowels are hardly any cause of trouble. This is mainly attributed to: firstly, the restricted vowel quality range; and secondly, the maximum qualitative difference between them. In other words the vowel system of Arabic is a maximum triangular one, i.e.

i u

a

Length which is of phonological relevance in Arabic, doubles the number of vowels, i.e.

i i: u u:

a a:

2. The following consonants:
b, t, d, k, dʒ, f, θ, ð, s, z, ʃ, h, l, r, m, n, j, w are seldom the cause of any serious difficulty since they are very similar to their English counterparts.[2]

3. It is usually these sounds: ṭ, ḍ, q, ρ, ð̣, ṣ, X, ʁ, h̄, ɋ that are the source of difficulty both in recognition and production.

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[1] I would like to express my thanks to Mr. P. Falvey of the British Council, Baghdad, for his comments on this paper.

[2] See O'Connor (1967) for a similar identification. However, it is noteworthy that if a refined phonetic evaluation is made, some differences can be marked with one sound or the other.

In this paper we would like to focus our attention on four of the last group of sounds, namely the emphatics:

ð̣ a voiced interdental emphatic fricative
ṣ a voiceless denti-alveolar emphatic fricative
ḍ a voiced denti-alveolar emphatic plosive
ṭ a voiceless denti-alveolar emphatic plosive

which form a well-defined category of sounds that is typical of the Arabic language. The term 'pharyngealization' is equally common to that of 'emphatic' as a label for this category of sounds. *Mufaxxama*, the Arabic coinage that is frequently used by native investigators to designate these sounds, has also gained some circulation in the English literature on Arabic phonetics and linguistics.[3]

In the first part of this paper we will deal with the articulatory nature of these sounds which constitute the difficulty, whereas in the second part we will introduce the approaches that we have tried in helping foreign learners of Arabic to oversome the difficulty.

THE ARTICULATORY NATURE OF THE EMPHATICS

The production of these sounds is a typical example of a secondary articulation called *pharyngealization*. According to Abercrombie such a secondary articulation is effected 'if the tongue is low in the mouth and retracted towards the back wall of the pharynx' (1967 : 62). Ladefoged expresses the same thing in a different manner: 'pharyngealization is the superimposition of a narrowing of the pharynx' (1975 : 208). This narrowing of the pharynx is superimposed on the tongue configurations of /ð, s, d, t/. However, the consequence of such a manoeuvre has not to be envisaged in terms of a simple mechanical process of laying one thing on top of the other. With pharyngealization the resulting configuration of the tongue represents a compromise between two antagonistic manoeuvres both of which are indispensable and are to be well effected. The first is the movement of the tongue-tip towards the denti-alveolar region to perform the primary stricture, and the second is the rearward movement of the back-root of the tongue towards the posterior pharyngeal wall to effect the secondary stricture. The features of lateral spreading of the anterior part of the tongue and its concavity pointed out by Lehn (1963), among others, that also characterize the Arabic emphatics, are in our view the 'size-effects' of the above-mentioned articulatory compromise. Therefore, we do not think of them as articulatory features that are executed by special orders from the brain. The last assumption is relevant in determining the priorities in instructions that we will recommend for the learners of Arabic to adhere to in order to produce satisfactory versions of the Arabic emphatics.

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[3] See Blanc (1953), Jakobson (1957), Odisho (1973).

Another feature that accompanies the production of the emphatics, and is proprioceptively felt, is the increased tension of the whole oral and pharyngeal musculature.

Most investigators agree that the significant feature that differentiates the emphatics and their plain counterparts is the backing gesture of the tongue which divides the vocal tract into two cavities: a small back cavity (pharyngeal) and a large front cavity (oral). This feature has also been described by some investigators as 'tongue shape' (Ali *et al.* 1972). Nevertheless, inasmuch as the opposition /ṭ/=[ṭ] vs. /t/=[t^h] is concerned, it is necessary to point out that we do not agree with the conclusion drawn by Ali *et al.* in that there is no physiological correlate other than tongue shape to differentiate them (*op. cit.*, 645) because the same opposition can be distinguished on the basis of another physiological feature, namely the glottal state at the instant of the release of the supraglottal stricture (Odisho *et al.* 1975). [ṭ] has a closed glottis at the instant of the release and for a while before it, whereas [t^h] has an open glottis at the instant of the release and for a while after it. The direct consequence of such a glottal gesture is that the former appears unaspirated while the letter appears aspirated (Fig. 1). This is in line with Kim's definition of aspiration in that it is the function of glottal opening at the instant of release (1970 : 111).

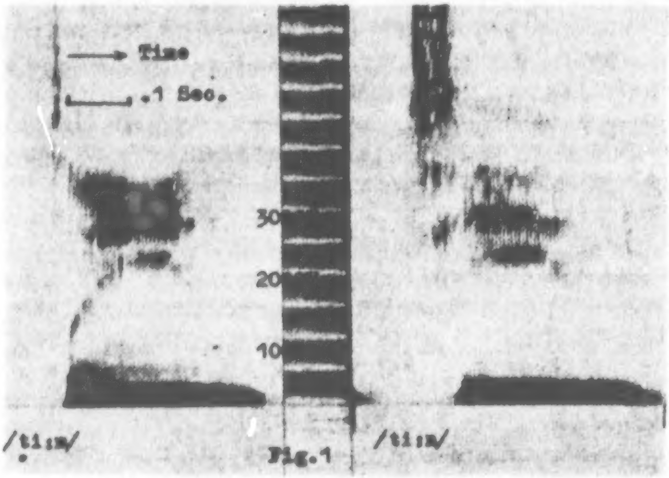

Fig.1

The backing gesture which we also consider the most significant manoeuvre in the production of the emphatics and also in determining the articulatory settings[4] of Arabic (Odisho, 1973) does not play an equally important role in the sound system of English. In English the best example of the backing gesture is found in the production of the vowel /ɑ/. Moreover, its production represents a primary articulation not a secondary one as is the case with the Arabic emphatics. It is therefore the difference in the nature and the extent of the phonetic and phonological manipulation of the backing gesture between the two languages that causes the difficulty for the native English learners of Arabic in the proper production of the Arabic emphatics.

PRACTICAL PROCEDURES TO MASTER THE PRODUCTION OF EMPHATICS

The existence of the two vowel qualities /æ/ and /ɑ/ in English is of great help in this respect. /æ/ being a front vowel and just below the half-open position, and /ɑ/ being a back and open vowel — though not so back as the Cardinal Vowel 5, (Gimson 1967) may be utilized to demonstrate the difference between the emphatics and their plain counterparts fairly satisfactorily.

We have already mentioned above that the English and Arabic /ð, s, d, t/ hardly show any significant phonetic differences, therefore to use those consonants before or after the vowel /æ/ will yield sounds that are auditorily very similar to the Arabic non-emphatics. The idea behind choosing the English vowel /ɑ/, or preferably Cardinal Vowel 5 as an auxiliary device to produce the emphatics is because this vowel is pharyngeal in terms of its relevant stricture (Fant 1968). For its proper production the back-root of the tongue moves drastical towards the posterior pharyngeal wall thus causing considerable reduction in the size of the pharyngeal cavity. In fact Ladefoged (1975 : 208) clearly states that since cardinal vowel 5 has been defined as the lowest, most back possible vowel without pharyngeal friction, pharyngealization may be considered as the superimposition of this vowel quality.

In the light of the articulatory nature of Cardinal Vowel 5 or any other language-specific vowel that is near to it in quality, when /ð̣, s, d/ are produced before or after this vowel quality they give the impression to the native speaker of Arabic that they are auditorily fairly acceptable versions of the Arabic /∂̣, ṣ, ḍ/. English words 'suck, dumb, dull, sub, sud' which contain the vowel / ʌ / are more similar to the Arabic words صك ، ضم ، ضل ، صب ، صد than to the Arabic words سك ، دم ، دل ، سب ، سد . The first group of Arabic words contains emphatics whereas the second group contains their unemphatic counterparts. The realization of the phonetic difference between the above English words and the Arabic words in the second list could be used

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[4] For the term 'articulatory settings' see Honikman (1964).

as phonic material to enable the English learner to consciously distinguish the Arabic emphatics from their plain counterparts.

As regards the English or the Arabic /t/ its occurrence with /*a*/ does give it an unmistakable pharyngealized colouring but is still retains its aspirated nature. In other words it will appear as aspirated emphatic [ƫʰ] whereas what we should be aiming at is an unaspirated emphatic. Consequently, we need to train the learner to successfully produce a deaspiration manoeuvre. Of course we do not mean to give him the instructions in terms of phonetic jargon. The procedure we have adopted to face such a situation is to ask the learner to produce first a French 't' which is unaspirated. If he is able to do so then the next step will be to ask him to use the 't' before or after /*a*/. When he is able to satisfy these conditions he will find himself in a good position to produce a satisfactory Arabic /ƫ/. In case of his failure to produce an independent unaspirated [t] one has to follow another procedure. We have to make use of the English consonant clusters of [s+t] in which the 't' loses its aspiration either partially or fully. It has been found that in order to produce an auditorily satisfactory /ƫ/ in this type of clusters the vowel /*a*/ should preferably be after the cluster to secure a better superimposition of the feature of pharyngealization on [t] since it will be in juxtaposition to /*a*/. To substantiate the validity of such a procedure for the attainment of this kind of emphatic, one can adduce the English words 'stamp' and 'stop' and the way they are pronounced in the colloquial Arabic of Iraq. In fact they are pronounced with a full realization of the emphatic /ƫ/. This is so partly because the 't' in these two English words is unaspirated and partly because their vowels are replaced in Arabic by /*a*/.

Another approach for the production of the Arabic emphatics has been used with both English and non-English, learners of Arabic. This approach is based on Jakobson's et al. (1952) statement that the acoustic results of labialization are perceptually similar to those of pharyngealization, and also on what they have reported concerning the tendency of the Bantus and the Uzbeks to substitute a labialized articulation for the corresponding pharyngealized (emphatic) consonants of Arabic word. When my students were asked to produce /ð, s, d, t/ followed by /u/ the resulting sounds were hardly recognizable as the Arabic emphatics. It is true that they look somewhat 'muffled' due to lower resonance, a quality that is characteristic of the emphatics and is designated by Jakobson as the feature 'flatness'. But the question is whether 'flatness' is equal in both cases. Auditorily judged, the answer is in negative, because any native speaker will reject the labialized versions of /ð, s, d, t/ as unsatisfactory substitutions for the Arabic emphatics. Therefore, Jakobson's suggestion that pharyngealization (non-pharyngealization and rounding) unrounding should be combined into the feature 'flat/plain' seems to be notivated by the requirements of having a limited set of universal distinctive features rather than by the evidence of phonetic equivalence of the above two phenomena. As for the observation that the Bantus replace the Arabic pharyngealized consonants by labialized ones we agree that this is so but we doubt whether the substitution does produce what can be judged by the native speaker of Arabic as auditorily satisfactory emphatics.

CONCLUSIONS

It has been found that the Arabic emphatics do cause a real problem to the learners of Arabic. It has also been found that in order to enable the learners master the difference in the production of the emphatics and non-emphatics the approach that is based on an /æ/ vs. /ɑ/ opposition is more helpful and constructive because it is systematic and takes into consideration the proper articulatory nanoeuvres that are behind the Arabic oppositions of emphatics and non-emphatics.

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